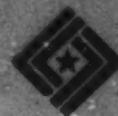


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Current Employment Statistics State Operating Manual



U.S. Department of Labor
Bureau of Labor Statistics

October 1985

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Current Employment Statistics State Operating Manual

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October 1985

Preface

The CES State Operating Manual describes approved survey methodologies that are to be used by the States in the Current Employment Statistics survey. In this Federal/State cooperative survey, participating States collect and process the data and prepare State and Area estimates using the standardized procedures established by BLS to ensure uniformity and consistency among the States. The data that are collected by the States are transmitted to BLS-Washington and are used to produce national estimates. Technical assistance is provided to the States through the eight BLS Regional Offices.

This Manual is structured into 13 sections; they follow the logical process of

- . selecting and soliciting new establishments
- . collecting and processing monthly data schedules
- . transmitting monthly reporter data to BLS
- . preparing monthly employment and earnings estimates
- . benchmarking estimates
- . transmitting estimates to BLS

The Manual also contains several appendixes of reference material, which are updated periodically to reflect the most current information available. The Manual should be kept in a looseleaf binder to facilitate incorporating changes. Update procedures are described on Page vii; Page ix lists all pages that have been updated since the October 1985 version of this Manual was released. Comments on the documentation or other suggestions should be entered on the comment form, Page xi. States should send these forms to their Regional Office; Regional Offices should send the forms to the attention of the Project Manager in the Division of Federal/State Monthly Surveys.

The 1985 revision of the Current Employment Statistics State Operating Manual was prepared jointly by the Division of Federal/State Monthly Surveys and by the Division of Monthly Industry Employment Statistics in the Bureau of Labor Statistics. Assistance and comments were provided by the BLS Regional Offices and the cooperating State agencies.

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UPDATE PROCEDURE

From time to time, as with all technical materials, this document will be updated as the need arises. Revisions will be in the form of "pen and ink" changes, or revised pages to be inserted. In either case, changes will be described in a numbered technical memorandum. The CES Technical Memoranda are directed to the States and BLS regional offices and are designated with a "S" and are sequentially numbered starting with "1" each fiscal year.

Revised pages will include a marking in the left margin which identifies the location of adds, deletes, or changes to the wording in the prior version of the text. Additional wording will be indicated by (+) in the margin, changes to existing wording will be shown by (*), and deletions by (-). An asterisk or plus sign at the top left of a page indicates change or addition, respectively, of an entire page. The revision date will appear in the upper right corner of the page.

For your convenience, you will also receive a page that lists each updated page and the month and year it was last updated. (See Page ix.)

(NOTES)

PAGES UPDATED SINCE ISSUANCE OF THE OCTOBER 1985 MANUAL

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(NOTES)

CES STATE OPERATING MANUAL

COMMENT FORM

Your comments about this material will help us to improve it for you. We are interested in your comments about its usefulness, technical accuracy, organization, and completeness.

Please indicate your name and occupation or title _____

How suitable is this material for your own requirements?

_____ very suitable _____ suitable _____ not suitable

What information not presently covered should be included?

What information presently covered should be excluded?

Additional comments (please give page numbers where appropriate):

Regional Office Staff

Send this form to:
Bureau of Labor Statistics
Attn: Project Manager, F/SMS
CES Survey, Mail Code 3
441 G Street, N.W.
Washington, D.C. 20212

State Staff

Send this form to the Regional
Office, which will forward it to
BLS-Washington.

If you wish a reply, please so indicate, and include your name and mailing address.

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Section 1: OVERVIEW OF THE CES SURVEY1.1 INTRODUCTION1.1.1 The Objectives of the Current Employment Statistics (CES) Survey

The main objective of the CES survey is the preparation of current estimates of nonagricultural employment, hours, and earnings each month. This Manual provides instructions for the preparation of such estimates.

The employment, hours, and earnings estimates for the United States as a whole are prepared by the National Office of the Bureau of Labor Statistics (BLS-Washington) of the U.S. Department of Labor. The State agencies cooperating with BLS prepare the estimates for the States and for most metropolitan areas. Statistical and geographic comparability are insured by using the same basic procedures at the national, State, and area levels. This Manual provides these procedures.

The continuity of each of the series is essential, since they are time series. Ideally, the data for all of the months in a time series should be comparable. All techniques and procedures considered for adoption are analyzed to determine their effects on the continuity of the series of estimates. When the continuity of a series cannot be maintained, a "break" in the series is accepted. Every effort is made to provide an overlapping period for which data are provided for both the prebreak and postbreak series.

1.1.2 The CES State Operating Manual

The concepts and procedures used by BLS and the cooperating State agencies must be uniform in order to ensure public understanding of the CES survey, to facilitate comparative geographic analysis, and to provide a sound basis for the national series. These objectives can only be met if the instructions in this Manual are followed. All instructions and requirements in this Manual are mandatory unless stated otherwise for specific cases.

The CES State Operating Manual consists of one volume. It presents technical procedures, operating instructions, and other CES information. It serves as a guide for day-to-day use in the preparation of the CES estimates and related activities.

The appendixes to the Manual include supplementary operating material such as: the current BLS 790 schedules, other record and report forms, lists of key reporters, national reporters, comment codes, etc.

Supplementary instructions to the Manual are provided in a numbered series of memorandums known as CES Technical Memorandums. They include short-lived or urgently-needed special instructions, revisions to the Manual, corrections of errata, and general information related to the CES survey.

1.2, THE BACKGROUND OF THE CES SURVEY

Before 1915, the principal sources of national employment data were the Census of Population (taken every ten years) and the Census of Manufactures (taken every two years). A few States collected employment data then, but they were incomplete and not representative of the nation as a whole.

In 1915, BLS began to collect employment and payroll data for four manufacturing industries each month on a voluntary basis using a single-month form. The data were published as percentage changes from one month to the next.

In 1916, the number of industries increased to 13; the sample consisted of fewer than 200 reporters. The Federal-State cooperative survey began when BLS and the State of New York signed a cooperative agreement that allowed New York and BLS to use the sample data collected by New York.

In 1920, Wisconsin became the second State to join the cooperative survey.

In 1923, twenty-nine additional manufacturing industries were added to the BLS employment survey, bringing the total to 52 industries.

By 1928, seven States were cooperating with BLS in the survey. Fifty-four manufacturing industries were being published in the Monthly Labor Review on a regular basis as employment and payroll indexes. In addition, percentage changes in employment and payrolls were being published by State, by industry group.

In 1929, eleven nonmanufacturing industries were added to the list of regularly published industries. The total number of reporters in the sample now exceeded 34,000.

In 1930, the cooperative survey received its formal base of authority, a Congressional act of July 7, 1930 (ch. 873, 46 Stat. 1019; 29 U.S.C.2). A new six-month shuttle schedule replaced the single-month schedules used to collect the data previously.

In 1931, BLS compared its employment index data to Census of Manufactures employment data. The BLS data had a downward bias of about 12 percent. This finding led BLS to revise its employment data for the period, 1923-1929, to approximate the Census levels during that period. (The results were published in 1935.)

By 1932, another 38 manufacturing and 15 nonmanufacturing industries were added to the list of industries for which BLS published monthly information on employment and payrolls.

In 1933, BLS began to publish average weekly hours (AWH) and average hourly earnings (AHE) data for the first time for total manufacturing and for 15 manufacturing industries.

In 1935, BLS published employment and payroll indexes for 90 manufacturing industries. In addition, BLS performed the first adjustment of its manufacturing employment data to the new Census of Manufactures benchmark data from 1923 to 1931. These manufacturing series were then adjusted to Census of Manufactures data every two years through 1939. Nonmanufacturing benchmarks were developed from various other sources.

In 1935, Congress enacted the Social Security Act. Part of this act established the unemployment insurance (UI) program. Under this program, employers meeting certain criteria were taxed by the States. In order to determine the tax, these employers were required to report employment and payroll data to the States. BLS gained access to these data five years later. It then adopted the UI employment data as its primary source of benchmark data. The UI data covered more industries than the previous benchmark sources used by BLS. In addition, the UI data were available every year instead of every other year.

By 1936, twelve States were participating in the cooperative survey with BLS. BLS collected data directly for seven other States. For the first time, BLS published a series for total nonagricultural employment in the United States.

In 1938, a new twelve-month shuttle schedule replaced the six-month shuttle schedule used previously.

In 1940, estimates of total nonagricultural employment for all 48 States and the District of Columbia were published for the first time. In addition, BLS adopted the UI data as its basic source of employment benchmark data. The States with cooperative agreements with BLS began to estimate their own State and area data. The BLS regional offices prepared the estimates for the other States.

In 1945, the Standard Industrial Classification was adopted for manufacturing industries; sixteen years later it was extended to nonmanufacturing industries also. In addition, in 1945, BLS began to collect data for "production workers" instead of "wage earners" on the collection schedules.

In 1947, BLS began to shift away from the preparation of the State and area estimates in its regional offices by encouraging the States to enter into cooperative agreements with BLS and to prepare the State and area estimates in the States. From 1945 to 1949, an additional 32 States signed such cooperative agreements. In addition, in 1947, the concept of the L/P code was introduced. An L/P code column was added to the collection forms. Another column was also added in order to collect "total employees" for the first time.

By 1949, BLS had signed cooperative agreements with all 48 States and the District of Columbia. Since then, the CES survey has been a fully-integrated Federal-State cooperative survey -- the oldest such survey in the United States.

In 1954, BLS began to prepare and publish seasonally-adjusted CES employment estimates for the first time.

By 1965, employment, hours, and earnings estimates were available monthly for the nation, all 50 States, the District of Columbia, and for 170 areas. The sample supporting these estimates exceeded 160,000 reporters.

By 1980, BLS had established the LABSTAT (Labor Statistics) data base. This is a repository containing time-series macrodata for the CES survey and other BLS programs. More than 2,800 national CES series are included as well as more than 24,000 CES State and area series. Employment data for 250 areas are included; hours and earnings data for 210 areas are included also. These data are available to the public and are accessible in machine-readable form.

1.3 CES CONCEPTS

1.3.1 General Concepts

A. Establishment

An establishment is an economic unit that produces goods or services, such as a factory, mine, or store. Ordinarily, it is at a single physical location, engaged predominantly in one type of economic activity. If a single physical location includes two or more distinct and separate activities, they are treated as separate establishments if

separate payroll records are available and certain other criteria are met. Ordinarily, in the CES survey separate reports by establishment are requested. However, when a company has more than one establishment engaged in the same activity in the same geographic area, their data may be combined into one report.

B. Industry Employment Statistics

The industry employment statistics estimated by BLS and the cooperating State agencies in the Current Employment Statistics (CES) survey represent the total number of persons employed either full-time or part-time in nonagricultural establishments during a specified pay period.

C. Pay Period

Employers are requested to report data for any employees who worked or received pay for any part of the entire pay period reported. This pay period must include the 12th of the month. Typically, pay periods are: weekly, biweekly, semimonthly, or monthly.

When the pay period reported is longer than one week, the payroll and worker-hour data must be converted to a one-week basis. (See Secs. 6.3.5 and 6.3.6.) Special editing involving the pay period reported may be necessary in certain strike and shutdown situations. (See Sec. 6.4.1.)

NOTE: The national federal government data received from OPM by BLS generally refer to personnel who worked on or received pay for the last day of the month, plus any intermittent employees who worked at any time during the month.

1.3.2 Employment ConceptsA. Employed Persons

In the CES survey, the following are counted as employed persons:

- . Persons who worked or received pay for any part of the entire pay period reported. This period must include the 12th of the month. However, in certain strike and shutdown situations it is necessary to determine the employment status of these persons during a 7-day period that: (1) includes the 12th of the month, and (2) falls entirely within the pay period reported. (See Sec. 6.4.1.)
- . Permanent and temporary employees
- . Full-time and part-time employees
- . Persons who received pay for the period reported directly from the company for: holidays, sick leave, vacation days, and other paid leave

NOTE: Persons employed by more than one establishment during the pay period are to be reported by each establishment that employs them, whether the duplication is caused by turnover or multiple job holding.

The following are NOT counted as employed persons by the CES survey:

- . Persons receiving no pay at all for the entire pay period reported
- . Persons on leave without pay from the company for the entire pay period reported
- . Persons on strike during the entire pay period reported
- . Persons laid off during the entire pay period reported
- . Persons hired, but not yet reporting to work during the pay period reported
- . Members of the Armed Forces and pensioners carried on the rolls of the company, but not working during the entire pay period reported
- . Proprietors and self-employed persons
- . Unpaid family workers and unpaid volunteer workers
- . Domestic workers in households and farm workers
- . Military personnel (excluded from government employment data)

B. All Employees (AE)

The term "all employees" refers to all persons who meet the CES survey's criteria for employed persons. (See Sec. 1.3.2.A.) Most types of BLS 790 schedules refer to all employees as the "Number of Paid Employees - Both Sexes." The schedules for federal government installations use the term, "Number of Civilian Employees - Both Sexes." The schedules for service establishments refer to "All Employees - Both Sexes" since unpaid workers of religious orders are to be included.

Other major categories of employees are differentiated from this overall total in order to ensure the expeditious collection of current statistics on the number of women workers and on the hours and earnings of production workers, construction workers, and nonsupervisory employees.

C. Women Workers (WW)

Women workers are a subcategory of all employees. The criteria for all employees also apply to women workers, except that men are excluded. On the BLS 790 schedules this category is labeled "Women Only"; it is shown as a subcategory of "Number of Paid Employees" on most of the schedules.

D. Production Workers (PW)

In mining and manufacturing industries, employment, worker-hour, and payroll data are collected for production workers. In manufacturing industries this category of workers ordinarily includes nonsupervisory workers (and working supervisors) who are directly engaged in the manufacture of the product(s) of the establishment and other closely related activities. In mining industries this category of workers ordinarily includes nonsupervisory workers (and working supervisors) who are directly engaged in mining, quarrying, drilling, or other closely related activities.

In construction industries, employment, worker-hour, and payroll data are collected for construction workers. This category of workers ordinarily includes nonsupervisory workers (and working supervisors) regardless of skill who are directly engaged on a construction project either at the site or working in shops or yards at jobs ordinarily performed by members of the construction trades.

Employment, worker-hour, and payroll data for nonsupervisory employees are collected from establishments in the transportation, communication, and public utility industries; in retail and wholesale trade; in the finance, insurance, and real estate industries; and in the service industries. The nonsupervisory employee category includes most nonexecutive, nonmanagerial employees. Unpaid workers of religious orders are excluded from the nonsupervisory employee category, however, they are included in the all employee and women worker categories.

NOTE: More detailed descriptions of the classes of employees included in, and excluded from, the production worker, construction worker, and nonsupervisory employee categories are shown on the facsimiles of the BLS 790 schedules located in Appendix B.

1.3.3 Aggregate Hours and Earnings Concepts

A. Introduction

The basic hours and earnings series in the CES survey are based on the reports' gross payrolls and the corresponding paid worker-hours for production workers. (References in this Manual to production workers refer to all of the following unless otherwise noted: production workers in the mining and manufacturing industries, construction workers in the construction industries, and nonsupervisory employees in the other nonmanufacturing industries.) In order to derive the average hours and earnings series, the data items discussed below are collected.

B. Production Workers (PW)

This data item refers to the number of production workers who meet the CES survey's criteria for employed persons. (See Sec. 1.3.2.A.)

C. Payrolls (PR)

This data item refers to the total gross production worker payrolls before deductions for old-age and unemployment insurance, group insurance, withholding taxes, bonds, and union dues. The payroll data also include pay for overtime, shift premiums, holidays, vacations, and sick leave paid directly by the company to the production workers for the pay period reported.

The payroll data exclude bonuses (unless earned and paid regularly each pay period), other pay not earned in the pay period reported (e.g., retroactive pay), tips, and the value of free rent, meals, or other payments in kind. Fringe benefits paid by the employer (such as health and life insurance, retirement contributions, etc.) are also excluded.

D. Worker-hours (WH)

This data item refers to the total number of hours worked by production workers (including overtime hours) during the pay period reported, including hours paid for standby or reporting time, and equivalent hours for which the production workers received pay directly from the company for sick leave, holidays, vacations, and other paid leave. (The workweek information relates to hours paid for, which differ from scheduled hours and hours worked.)

E. Overtime Worker-hours (OTWH)

This data item refers to the number of overtime hours worked by production workers for which overtime premiums were paid because the hours worked were in excess of the number of hours of either the straight-time workday or the straight-time workweek during the pay period reported. Saturday or Sunday hours (6th or 7th day hours) are included as overtime hours only if overtime premiums were paid for them. Holiday hours worked as overtime are not included unless they are paid for at more than the straight-time rate. Hours for which only shift differential, hazard, incentive, or similar types of premiums were paid are excluded from overtime hours.

NOTE: If the pay period reported is longer than one week, the payroll, worker-hour, and overtime worker-hour data must be reduced to a one-week basis. Overtime worker-hour data are only collected from establishments in manufacturing industries. Payroll data collected from educational institutions and government installations relate to all employees instead of production workers.

1.3.4 Average Hours and Earnings Concepts

The following four data types are not collected directly on the BLS 790 schedules; they are derived from the data types that are collected on the schedules. (See Sec. 1.6.2.)

A. Average Weekly Hours (AWH)

The workweek information relates to the average number of hours for which pay was received; this is not the same as standard hours or scheduled hours. Factors such as unpaid absences, labor turnover, part-time work, and work stoppages (strikes) cause average weekly hours (AWH) to be lower than the scheduled hours of work for an establishment. Group averages further reflect changes in the workweeks of the component industries involved.

B. Average Hourly Earnings (AHE)

Gross average hourly earnings (AHE) reflect not only changes in basic hourly and incentive wage rates, but also such variable factors as premium pay for overtime and late-shift work and changes in the output of production workers paid on an incentive plan. They also reflect shifts in the number of production workers engaged in relatively high-paid and low-paid work, and changes in the average weekly earnings (AWE) of the production workers in individual establishments. The averages for groups and divisions further reflect changes in average hourly earnings (AHE) for individual industries.

Average hourly earnings (AHE) differ from wage rates. Earnings are the actual return to a worker for a stated period of time; wage rates are the amount of pay stipulated for a given unit of work or time. Earnings series do not measure the level of total labor costs to an employer because the following labor costs are excluded: irregular bonuses, retroactive payments, taxes paid by the employer, and the earnings of nonproduction workers.

C. Average Weekly Earnings (AWE)

Gross average weekly earnings (AWE) are affected by changes in gross average hourly earnings (AHE) and average weekly hours (AWH), the length of the workweek. Monthly variations in the following factors may cause the average workweek to fluctuate: the proportion of part-time workers, work stoppages (strikes), labor turnover during the survey period, and absences for which employees are not paid.

Long-term trends in gross average weekly earnings (AWE) can be affected by structural changes in the composition of the workforce. For example, persistent long-term increases in the proportion of part-time workers in retail trade and in many of the service industries have reduced the average workweek in these industries and affected the average weekly earnings (AWE) series.

D. Average Weekly Overtime Hours (AWOH)

Average weekly overtime hours (AWOH) are that part of gross average weekly hours (AWH) that exceeds regular hours and for which overtime premiums are paid. If an employee works on a paid holiday at regular rates, receiving as total compensation, holiday pay plus straight-time pay for the hours worked that day, no overtime hours are reported.

Since overtime hours in the CES survey are premium hours by definition, gross average weekly hours (AWH) and average weekly overtime hours (AWOH) do not necessarily move in the same direction from month to month. For example, overtime premiums may be paid for hours worked in excess of the regular workday, although less than a regular workweek is worked.

Diverse trends at the industry group level may also be caused by a marked change in gross average weekly hours (AWH) for a component industry where little or no overtime was worked in both the previous and current months. In addition, such factors as work stoppages (strikes), unpaid absences, and labor turnover may not have the same influence on overtime hours as on gross hours.

1.3.5 Derivative Series Concepts

A. Average Hourly Earnings Excluding Overtime (HEEO)

To approximate average hourly earnings excluding overtime (HEEO), gross average hourly earnings (AHE) are adjusted by eliminating premium pay for overtime at the rate of time and one-half. In other words, the total production worker payroll for an industry is divided by the sum of total production worker hours and one-half of the production worker overtime hours. This method eliminates only the earnings for overtime paid for at one and one-half times the straight-time rates. No adjustment is made for other premium payment provisions such as holiday work, late-shift work, and overtime rates other than time and one-half.

B. Indexes of Aggregate Weekly Worker-Hours and Payrolls (WHI, PRI)

The indexes of aggregate weekly worker-hours and aggregate weekly payrolls are prepared by dividing the current aggregate by the average of the twelve monthly figures for the base year. For basic industries, the weekly worker-hour aggregates (WH) are the product of the average weekly hours (AWH) figure and the comparable production worker (PW) figure; the weekly payroll aggregates (PR) are the product of the weekly worker-hour aggregate (WH) figure and the comparable average hourly earnings (AHE) figure. At all higher levels of industry aggregation, the worker-hour and payroll aggregates are the sum of the component aggregates.

1.4 BLS 790 SCHEDULES

1.4.1 Collecting CES Sample Data

The sample data collected by the CES survey (employment, payroll, and worker-hour data) are obtained by means of schedules (forms) mailed each month to reporters in the sample. The basic schedule used is called the Report on Employment, Payroll, and Hours (Form BLS 790). The definitions of the terms used on the schedules and the instructions for filling them out are printed on the schedules.

Normally a respondent uses the same schedule for an entire calendar year in order to promote comparability and economy. The schedule "shuttles" back and forth each month between the respondent and the cooperating State agency via the mail. (NOTE: The BLS 790 B-M is not a shuttle schedule.)

After editing, the sample data are used in the preparation of State and area estimates; the sample data are also transmitted to BLS-Washington for use in the preparation of the national estimates.

1.4.2 Types of BLS 790 Schedules

The BLS 790 schedules vary somewhat depending on the special characteristics of an industry. For example, the schedule for trade includes a column for commissions, since they are common in trade. The industry involved determines which of the following terms are used on a particular type of BLS 790 schedule: production workers, construction workers, or nonsupervisory employees. The different types of schedules are distinguished by alphabetic letters that follow the term, "BLS 790." The current BLS 790 schedules are included in Appendix B. The 12 types of BLS 790 schedules currently in use are listed below.

BLS 790:

- A: Mining
- B: Construction (Intrastate)
- B-M: Construction (Interstate)
- C: Manufacturing
- D: Transportation, Communication, and Public Utilities
- E: Trade
- F: Finance, Insurance, and Real Estate
- G: Services
- S: Education (private and government)

- J-L: State and Local Government (Except Schools)
 J-F: Federal Government (except the Department of Defense)
 J-FD: Federal Government (Department of Defense)

1.4.3 Revising BLS 790 Schedules

BLS-Washington reappraises the design of the BLS-790 schedules periodically. BLS is particularly interested in receiving suggestions for improvement from the cooperating State agencies. Suggestions for improvement are also solicited from the BLS business and labor advisory committees, employers, unions, government agencies, and private organizations.

Once revisions have been decided upon, BLS-Washington submits the proposed BLS 790 schedules to the Office of Management and Budget (OMB) for approval, as required by law. **NOTE:** It is unlawful for a cooperating State agency to change the content of the BLS 790 schedules in any way.

1.5 INDUSTRY CLASSIFICATION

1.5.1 The Standard Industrial Classification (SIC) System

The system of industry classification used in the CES survey is the Standard Industrial Classification (SIC) prepared by the Office of Management and Budget (OMB). The CES estimates are published within the framework of this system, which includes: industry divisions, major groups (two-digit SIC codes), industry groups (three-digit SIC codes), and industries (four-digit SIC codes). SIC codes may be combined to form a series in the CES survey when necessary. The CES survey currently uses the 1972 version of the SIC.

1.5.2 Nonagricultural Industry Divisions

The nonagricultural sector of the economy consists of nine industry divisions (see list below). The sum of the estimates of all employees for each of these industry divisions is the estimate used in the CES survey for total wage and salary employment in nonagricultural establishments (exclusive of private households).

Industry Divisions

- | | | |
|-----------------|--|--|
| . Mining | . Transportation and
Public Utilities | . Finance, Insurance,
and Real Estate |
| . Construction | . Wholesale Trade | . Services (including
certain agricultural
services) |
| . Manufacturing | . Retail Trade | |

Government

1.5.3 Classification by Product or Activity

Reports in the CES sample are classified into significant economic groups according to their major product or activity as determined by percentages of the reporter's total sales or receipts for the previous calendar year.

Product or activity information is obtained from reporters when they are assigned a UI account number; subsequently this information is obtained on a regular cycle, ordinarily every three years.

Each State prepares a report once each quarter called the ES-202 Report and submits it to BLS. The report includes employment, payroll, and tax data, by industry. It is based on the contribution reports filed with the State agency each quarter by employers covered by State unemployment insurance (UI) laws.

The actual industry coding procedures are usually handled by the ES-202 staff in each State; this includes the collection of necessary information from the employers, the review of the information, and the assignment of appropriate SIC codes. The CES staff may request the ES-202 staff to initiate these procedures for new or existing CES reporters. (See Section 2 for detailed information concerning industry classification.)

1.6 BASIC ESTIMATING PROCEDURES IN THE CES SURVEY

1.6.1 Basic Procedures for Estimating Employment

The basic procedures used to estimate current monthly employment by industry for the nation, the States, and for metropolitan areas are outlined briefly below. They are discussed in much greater detail in the sections following Section 1.

Estimates of all employees (AE) by industry are based on reasonably complete employment counts (benchmarks). The three steps below are necessary in order to obtain estimates of all employees for the individual basic estimating cells.

1. Obtain a total employment figure (benchmark) for all employees for each basic estimating cell as of a specified month (usually March) from sources that provide a reasonably complete count of total employment for the cell.

2. Next, compute the all employee link relative. Obtain this ratio by dividing the all employee total for the "current" month of the "current" matched sample by the all employee total for the "previous" month of the "current" matched sample. The "current" matched sample for all employees consists of all reports that passed certain editing and screening tests and that reported all employees for both the "current" month and the "previous" month.

3. Beginning with the month following the benchmark month, compute the estimate of all employees for each succeeding month by multiplying the estimate of all employees for the previous month by the link relative for the current month.

This procedure for estimating current employment is known as the link relative technique. It is an efficient technique that takes advantage of reliable benchmark data and of the high correlation between the levels of the all employee figures in successive months in matched reports, i.e., those reports reporting all employees in two (2) successive months.

An employment series may require the application of a fixed or variable bias adjustment factor each month when the sample does not reflect new establishment births accurately. In addition, an estimate may need to be adjusted for atypical sample data occasionally. (Detailed procedures used to handle these situations are provided in Section 8.)

Estimates of women workers and production workers (called construction workers or nonsupervisory employees in some industries) are computed as follows: the sample ratios of women workers and production workers to all employees (ww/ae , pw/ae) for the current month are computed; then the estimate of all employees for the current month is multiplied by the sample ratios. If changes in the composition of the sample take place, the sample ratios of women workers and production workers to all employees are modified by a wedging technique. (See Section 8.)

The estimates for individual basic estimating cells are summed to obtain totals for each employment data type (all employees, women workers, and production workers). Then the detailed series are summed into broader industry groups and divisions (summary cells). Appropriate revisions, based on new benchmarks, are introduced into the employment series as required (usually once a year) to correct for classification changes and variations resulting from the estimating process.

1.6.2 Basic Procedures for Estimating Hours and Earnings

Independent benchmarks are not available for hours and earnings series. The levels shown are derived from the reporting sample. In order to estimate hours and earnings, it is first necessary to stratify the data by industry and, when necessary and appropriate, by size class. Stratification is necessary in order to obtain more accurate average hourly earnings (AHE) levels for a sample that is dominated by large establishments with earnings that are generally higher than the earnings of small establishments.

Reporters must report production workers, payroll, and worker-hours for two consecutive months in order to be included in the hours and earnings sample for those months. The hours and earnings estimates are for production workers (referred to as construction workers or nonsupervisory employees in some industries) only, and not for all employees (which include nonproduction workers).

The preparation of hours and earnings estimates for individual basic cells is summarized briefly below:

1. Compute average weekly hours by dividing the sample total of worker-hours for a cell by the sample total of production workers for the same reports, i.e., $awh = wh/pw$.
2. Compute average hourly earnings by dividing the sample total of payrolls for a cell by the sample total of worker-hours for the same reports, i.e., $ahc = pr/wh$.
3. Compute average weekly earnings by multiplying the average weekly hours by the average hourly earnings, i.e., $awe = awh \times ahe$.
4. Compute average weekly overtime hours in manufacturing cells by dividing the overtime worker-hours by the number of production workers reported by the reports reporting overtime worker-hours, i.e., $awoh = otwh/pw$.

In certain industries the worker-hour sample may be inadequate. The average weekly earnings figures for these industries are computed by dividing the sample total of payrolls for a cell by the number of production workers for the same reports, i.e., $awe = pr/pw$.

When necessary, adjustments are made to the hours and earnings averages in basic cells for reporter nonresponse, which can cause sample breaks to occur. Therefore sample averages for the previous month are computed in addition to those for the current month so that the direction and magnitude of the change between the two months can be determined. In addition, adjustments for atypical sample data may be needed occasionally. (Procedures used to handle these situations are provided in Section 9.)

Hours and earnings averages for summary cells are obtained by weighting the averages for the component cells by the production worker estimates for those cells, and summing the resulting aggregates to the higher levels.

1. Compute the estimated worker-hour aggregate for each component cell by multiplying the estimated average weekly hours for the cell by the production worker estimate for the cell, i.e., $WH = AWH \times PW$.
2. Compute the estimated payroll aggregate for each component cell by multiplying the estimated worker-hour aggregate for the cell by the estimated average hourly earnings for the cell, i.e., $PR = WH \times AHE$.
3. Compute the payroll and worker-hour aggregates for a summary cell by summing the corresponding aggregates for the component cells.
4. Compute the estimate of average weekly hours for a summary cell by dividing the estimated worker-hour aggregate for the cell by the production worker estimate for the cell, i.e., $AWH = WH/PW$.
5. Compute the estimate of average hourly earnings for a summary cell by dividing the estimated payroll aggregate for the cell by the estimated worker-hour aggregate for the cell, i.e., $AHE = PR/WH$.
6. Compute the average weekly earnings for a summary cell in the same manner as for a basic cell, i.e., $AWE = AWH \times AHE$.

Certain summary cells may have component cells in which the worker-hour sample is inadequate. In such instances, the estimate of average weekly earnings (AWE) for the summary cell is weighted by the production worker (PW) estimate for the cell. The worker-hour aggregates (WH) are used as weights for the corresponding average hourly earnings (AHE).

1.7 CES TERMINOLOGY

Atypical Data. Data for a report that show a trend (or trends) markedly different from the trends of the data for other reports in a cell's matched sample. In addition, it must be reasonable to assume that the data's trend (or trends) is also markedly different from the trends of the data of reports in the cell's universe that are not in the cell's matched sample.

Benchmark. A reasonably complete count of the number of all employees (AE) in an industry at a specific point in time. In the CES survey, most benchmark data are obtained from unemployment insurance (UI) records.

Bias. Consistent errors in an employment series over a period of time in the same direction from the universe values.

Bias Adjustment. An adjustment made to compensate for bias in an employment series caused by the births of new establishments and other factors not reflected by the sample data.

Birth. The beginning of operations by a new establishment.

Casual Workers. Workers not employed in the course of their employer's usual business. For example, a person hired temporarily to shovel snow by a retail trade employer.

Commission. A fee, based on a percentage of the selling price, paid to an agent, broker, or salesperson for making a sale.

Death. The permanent closing of an establishment.

Editing. Examining data for consistency and conformance with pre-established criteria (often performed using a computer) and correcting the data when possible.

Employer. A person, company, firm, partnership, corporation, organization, institution, contractor, subcontractor, or government agency that pays wages or salaries to individuals in return for services rendered or work performed; may have one or more establishments at one or more locations.

Establishment. An economic unit that produces goods or services, ordinarily at a single physical location engaged predominantly in one type of economic activity.

Force Account Construction Workers. Employees on an establishment's payroll who are utilized as a separate workforce engaged in major additions or alterations to the plant. (Employees engaged in regular maintenance and repair operations are not included in this category.) In the CES survey, force account construction workers are counted as all employees in the industry of their employer, but they are not counted as production workers.

Index. A series of index numbers that is used to measure changes in groups of related data over a period of time. The basic form of an index number is a percentage relative that shows the relationship between two values. Index numbers are computed by dividing each of the series of numbers by the number in the series chosen as the base, and then multiplying each result by 100. The index number for the base period is always equal to 100.

Industrial Classification. The economic structure of the United States consists of a large number of establishments producing a great variety of goods and services. In order to study this heterogeneous field of economic activity, it is necessary to categorize these various activities. The resulting categories of activities are the industrial classification.

Industry. A group of establishments engaged primarily in the manufacture, distribution, or sale of a given product or a given type of service.

Link Relative. The ratio of the matched sample total for a given month to the matched sample total for the previous month for a series such as all employees for a given industry. The link relative is multiplied times the estimate for the previous month to determine the estimate for the given month.

Matched Sample. A sample composed of reports reporting a given data item (e.g., all employees) for both a given month and the previous month. Data for both months must meet the applicable editing and screening criteria.

Nominal Employees. Persons serving in local government positions who are excluded from CES estimates because they do not receive substantial amounts of compensation, or because their primary jobs are counted in other industries. For example, elected officials and paid volunteer firefighters in small communities, and school board members and school trustees who serve without pay are considered to be nominal employees.

Optimum Allocation. A systematic way of selecting a sample in order to obtain the best possible cross-section of different-sized establishments for minimum cost and with minimum error. In the CES survey, the optimum allocation procedure is done proportional to employment.

Random Selection. Choosing a sample in such a way that each item in the universe has an equal chance of being included in the sample.

Ratio. The relative size of two quantities expressed as the quotient of one quantity divided by the other.

Registry. The complete list of sample reporters in the CES survey for a given geographic area (nation, State, or area) and the related identifying information.

Reporting Unit (Reporter). A unit that submits reports to the CES survey. It may be an establishment, a group of establishments, or a department, agency, division, system, or area.

Retroactive Pay. Pay due for past services, frequently required when pay increases are made effective as of an earlier date.

Sample Break. A change in the level of the sample ratios of women workers or production workers to all employees, or in the levels of the average hours and earnings series that is caused not by the actual trend of the series, but by a change in the composition of the reporting sample from the sample composition in the previous month(s).

Sampling Ratio. The proportion of universe units that need to be sampled in order to provide data for a specified level of stratification. These ratios vary by cell and by data type.

Screening. Testing done to determine if data are reasonable and if they show the expected movement based on historical patterns.

Seasonal Adjustment. The adjustment of time-series data to eliminate the effect of intrayear variations that tend to occur each year in approximately the same manner. Examples of such variations include: school terms, holidays, and yearly weather patterns.

Trend. In the CES survey, trend refers to the month-to-month movement of a series. (This differs from "secular" trend which refers to the long-term growth or decline of an industry.

Wedge. A set of monthly adjustments that smooths out the difference between two figures in a time series (e.g., the estimate and the benchmark).

Section 2: BLS INDUSTRIAL CLASSIFICATION POLICY

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Section 2: BLS INDUSTRIAL CLASSIFICATION POLICY

2.1 INTRODUCTION

2.1.1 Purpose of Industry Classification

An industrial classification system provides for the grouping of establishments according to their significant economic activity. Within the framework of the system, the proper industrial classification of reports is essential in order to obtain accurate industry benchmark levels and in order to prepare reliable monthly estimates.

2.1.2 BLS Classification Policy

All industry surveys which are conducted by BLS in cooperation with States generally use a common sample frame made up of those employers who are covered by the State Unemployment Insurance laws. Unemployment Insurance (UI) coverage is practically universal for nonagricultural employers, and the sample frame requires little supplementation for CES survey sampling purposes.

The State Employment Security Agencies maintain UI files of covered employers and are responsible for assigning industry codes to each employer. Under administrative provisions of the UI laws, the monthly employment and total and taxable wages of these covered employers are collected and tabulated by industry and -- in many States -- by county into a quarterly ES-202 Employment and Wages report which is sent to BLS-Washington. Over the years, the ES-202 report has evolved into a timely and accurate indicator of the labor market. Also, an annual file of covered employers, with industry codes and other identifying information, is provided to BLS-Washington. These State files are compiled and maintained for sample selection purposes.

With the conversion of the 1967 SIC structure to the 1972 SIC structure, it was recommended and approved by all interested parties that the UI address file would become the centralized source of all industry coding activities and that the duplicate coding in surveys which are based on the ES-202 as the sampling frame would be phased out. The CES program has adopted all definitions and procedures for SIC coding that are contained in the ES-202 Manual issued in 1979 with subsequent updates.

2.2 THE ES-202 INDUSTRIAL CODING SYSTEM

2.2.1 Definitions

The following terms are taken from the ES-202 Manual and apply to the CES program.

- A. Employer. The employer is the legal entity which either pays the unemployment insurance tax, or elects or is required to reimburse the State unemployment fund for unemployment insurance benefits costs in lieu of paying the UI tax. In some cases the "subject employer" is equivalent to the establishment or the reporting unit, while in others the employer will include several establishments or reporting units.

Under government coverage, the organizational unit, such as the department, agency, or instrumentality responsible for a function of government, is the employer.

- B. Establishment. An establishment is an economic unit, such as a farm, mine, factory, or store, which produces goods or provides services. It is usually at a single physical location and engaged in one or predominantly one type of economic activity for which a Standard Industrial Classification (SIC) code is applicable.

Where a single physical location encompasses two or more distinct and separate economic activities for which different industrial classification codes seem applicable, such activities are treated as separate establishments and classified in separate industries, provided it is determined that: (1) no one industry description in the Standard Industrial Classification Manual includes such combined activities; (2) the employment in each such economic activity is significant to the local economy; (3) such activities are not ordinarily associated with one another at common physical locations; and (4) separate reports can be prepared on the number of employees, their wages and salaries, and other establishment-type data for each of the activities.

Under government coverage, the term "installation" is usually used instead of establishment.

- C. Reporting Unit. A reporting unit is the economic unit for which data are submitted on the employer's contribution report, or on a statistical supplement thereto, or on an employment and wages report of a government entity or of a nonprofit organization (as neither may be subject to payment of quarterly contributions). The reporting unit should be the smallest individual establishment or installation which is identified by the contribution report or by a statistical supplement.

In certain cases, two or more establishments are combined to make up one reporting unit. This occurs when establishments owned by the same employer are engaged in the same economic activity in the same county.

The Current Employment Statistics program is an establishment-based survey; when reporting units which are sampled from the ES-202 universe represent multiple establishments, it is useful for identification and later benchmark purposes to refine the reporting unit to one individual establishment.

- D. Industry code. Each establishment, reporting unit, or employer is assigned an industry code on the basis of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Descriptions of the industries covered by the industry codes can be found in the current edition of the Standard Industrial Classification (SIC) Manual.

The Standard Industrial Classification (SIC) is intended to cover the entire field of economic activities: agriculture, forestry, fishing, hunting, and trapping; mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; services; and public administration. The classification structure is designed so that all establishments primarily engaged in the same kind of economic activity are classified in the same four-digit industry, regardless of the type of ownership; hence, the owners may include such diverse legal organizations as corporations, partnerships, individual proprietors, government agencies, joint ventures, etc. Government establishments, therefore, are classified by their primary economic activity.

- E. Ownership. The classification of reporting units by ownership is according to legal proprietorship -- Federal, State, local, or international government, or private industry (private corporate, or private noncorporate) -- rather than by type of economic activity.

Ownership codes are necessary to distinguish between public or private activities. Regardless of type of industrial activity, each establishment in the ES-202 reporting system must carry a code number identifying public or private ownership. These codes are required to preserve continuity and usefulness of industrial and historic data. When tabulating data, the term "Government" is used to include all government-owned activities, regardless of SIC code, while the term "Public Administration" is used only for those legislative, judicial,

administrative, and regulatory SIC-coded activities not having a counterpart in private industry (SICs 91 - 97).

The two-digit code for ownership on the ES-202 is assigned as follows:

- 10 Federal government
- 20 State government
- 30 Local government
- 40 International or foreign government
- 50 Private sector
- 60 Private corporate (optional)
- 70 Private noncorporate (optional)

- F. Auxiliary Unit. An auxiliary unit is an establishment primarily engaged in performing supporting services for other establishments of the same company rather than for the general public or for other business firms. Auxiliary units are classified on the basis of the primary activity of the operating establishment(s) they serve.

<u>Auxiliary Code</u>	<u>Description</u>
0	--Not reported, or unknown
1	--Central administrative office
2	--Research, development, testing
3	--Storage (warehouse)
4	--Other auxiliary unit
5	--Not an auxiliary unit

2.2.2 Factors Determining Industry Classification

A. SIC System at the 4-digit Level

To enable data to be distributed by industry, SIC codes are assigned to reporting units based on the nature of their business activity. The industrial classification structure used in assigning industry codes on the ES-202 report and all other BLS programs, including the CES program, is the current edition of the Standard Industrial Classification Manual. The SIC Manual describes the activities included under each industry code. To meet the reporting requirements of the national office, private coverage reporting units and all Federal, State, and local government reporting units are classified to a 4-digit detail unless exempted from 4-digit coding. (See Exhibit 2-A for list of exempted industries.)

1. Industry Classification of Single Establishments

Industry codes assigned by the State agency correspond to the

principal product or activity of the establishment or place of business operated by the employer.

2. Single Establishments Engaged in More Than One Industrial Activity

A single establishment or place of business engaged in activities that fall into more than one 4-digit activity generally is assigned only one industry code based upon its principal product or activity. However, if the employer maintains separate payroll and inventory records for each separately classifiable activity, State agencies generally treat such activity as a separate establishment in assigning industry codes.

To select the principal activity of a multi-activity nonmanufacturing establishment, an exact description of the nature of business carried on and the principal product(s) handled or service(s) performed will usually suffice. Separate industry codes are provided in the Standard Industrial Classification Manual for those nonmanufacturing activities which are most frequently found in combination.

For manufacturing establishments, however, definite criteria are needed to determine which of several products or activities is major.

The principal product is determined, whenever possible, on the basis of gross sales value of each product or class of products produced in the establishment.

Occasionally, gross sales value cannot be determined or estimated for each product, or a classification based on gross sales value might misrepresent the process or activity of the establishment. In such cases, the major activity is determined by the activity in which the greatest number of employees were employed.

To eliminate the effect of seasonal or other short-term fluctuations, a 12-month period, preferably coinciding with the calendar year, is used as the basis for determining the principal activity. New establishments entering business for the first time are classified according to the principal anticipated activity. Normally this activity will be the same as that specified at the time the nature-of-business information is obtained.

3. Multiestablishment Employers

Employers who operate establishments in more than one county, or who operate more than one establishment or place of business within the county, all of which are not classifiable in the same 4-digit industry group, are required, except in certain cases, to submit an industry breakdown (on separate contribution reports or on a statistical supplement) of their monthly covered employment and quarterly total wages so as to provide a detailed and accurate industrial classification by county of these data on the ES-202 report.

B. Exceptions to 4-digit SIC Coding

Some exceptions to 4-digit coding, using the 1972 SIC system, were developed in cooperation with the State agencies. See Exhibit 2-A for the list of exceptions.

States utilizing excepted industry codes must code a zero (0) in the fourth digit of the SIC code. State agencies which do not opt for these exceptions must use the 4-digit code as shown in the 1972 SIC Manual.

C. Industry Coding of Multistate Construction Reporters

The home State of a multistate construction reporter collects the data monthly and distributes it to the respective States for processing. The individual States assign SIC codes for local sites based on the State U.I. records. Section 6.5.1 describes the State collection and processing procedures for multistate construction reporter data. Appendix D-3 lists the multistate construction reporters.

2.2.3 ES-202 Refiling Cycle

The industry and ownership codes which are assigned to covered employers are reviewed and updated periodically by the State Employment Security Agency. Establishments in employment size classes 8 and 9 (employment of 500 or more), except government establishments, are reviewed every year. Government establishments are reviewed on a variable cycle. The industry and ownership codes of the remaining private industry establishments are reviewed every three years.

The BLS-3023-A Industrial Classification Statement -- a series of forms for each industry group -- is used by the ES agency to collect initial product and activity information from new employers. (See Exhibit 2-B.1.) The BLS-3023-B Industrial Verification Form is used to confirm existing SIC codes assigned to employers. (See Exhibit 2-B.2.)

The following table outlines the established schedule of collection and coding of product or activity information by industry division. (The schedule may vary from State to State but all industries are reviewed within a 3-year period).

Product or Activity Information Collected During (calendar Year):

1972 SIC	Industry Division	: 1984:	1985:	1986:	1987:	1988:	1989:
01-09	Agriculture	:	X :	:	:	X :	:
10-14	Mining	:	:	X :	:	:	X :
15-17	Construction	:	:	X :	:	:	X :
20-39	Manufacturing	:	X :	:	:	X :	:
40-49	Transportation & Public Utilities	:	:	:	:	:	:
50-51	Wholesale Trade	X :	:	:	X :	:	:
52-59	Retail Trade	X :	:	:	X :	:	:
60-67	Finance	:	:	X :	:	:	X :
70-89	Services	:	:	X :	:	:	X :
	Government	X :	:	:	:	X :	:
9999	Nonclassifiable	X :	X :	X :	X :	X :	X :

If the ES-202 unit in a State has been unable to update the industry codes within a 3-year period, the CES unit is required to obtain updated product and activity information for all CES respondents. Use Form BLS-3023 and coordinate closely with the ES-202 unit in the State the process of collecting and coding the reported information.

2.2.4 Coordination of Industrial Coding

For identical reporting units, the CES report must have the same SIC as assigned in the ES-202 report. Coding problems which cannot be resolved at the State level will be referred to the BLS Regional Office for resolution.

To assure continued agreement of coding between the ES-202 and CES programs in the State, the CES unit each year must compare the assigned industry and ownership codes of the CES reports with the the current codes assigned by the ES-202 unit. Each State is responsible for developing its own procedures to accomplish this task.

2.2.5 Procedure for Requesting an SIC Change in the ES-202 Program

A. Originator (State CES Unit)

1. As coding discrepancies between CES and ES-202 industry codes are found, review the information on hand that suggests that the present ES-202 code assignment may be in error and compare with the information that was used by the ES-202 unit in making the code assignment.
2. Complete items 1 and 2 of "Request for SIC Coding Interpretation" (form SO-274.) (See Exhibit 2-C.) Describe briefly the reason that the CES unit believes the SIC code should be changed. (While this form is primarily designed for State-to-Regional Office transmission, it can be used within the State between the CES, ES-202, or other agencies.)
3. Send form 3042, along with supporting material, to the State ES-202 unit for review.

B. State ES-202 Unit Review

1. The State ES-202 unit should compare the information collected by the CES unit with the ES-202 coding information for the establishment and determine which code is appropriate.
2. The State then completes the request form and returns it to the State CES unit, with a justification for the assigned ES-202 code or the acceptance of the suggested code change. A copy of the UI industrial classification statement should be attached if the code is not to be changed.

3. If the State ES-202 unit is unable to arrive at a coding decision, it or the State CES unit should forward the form and supporting documentation to the BLS Regional Office for review.
4. Coding discrepancies which cannot be resolved by the BLS Regional Office will be forwarded to BLS-Washington for determination.
5. Once a coding determination is made, the State CES unit will make any needed code changes to the State and National files (see Section 8.2 for submitting updates to the National Registry). The State ES-202 unit will revise the SIC code on the UI file in accordance with ES-202 program procedures.

2.3 SAMPLE AUGMENTATION

2.3.1 Sample Selection

Each State must select and solicit new sample members on a periodic basis to maintain its prescribed stratified sample. (See Appendix G-1 for sample selection criteria, and Section 5 for procedures on adding reporters to the Registry.)

2.3.2 Coding New Sample Units

The coded information in the ES-202 files must be used as the reference source for coding the new CES sample members. The current BLS-3023 Industrial Classification Statement on file in the ES-202 unit may be reviewed for proper SIC assignment. Differences in coding interpretations should be resolved following the procedures outlined in this section. If the information on the BLS-3023 on file is more than 3 years old, or if a CES reporter is not covered by the ES-202, the CES unit should obtain current information using the BLS-3023 form or request that the ES-202 unit update the Industrial Classification Statement as required in the ES-202 Manual.

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 2
Rev. Oct. 1985

EXCEPTIONS TO 4-DIGIT CODING (1972 SIC)

EXHIBIT 2-A

The following industries may be coded to 3 digits if the State is unable to assign accurate 4-digit SIC codes. Code at the 3-digit level, using zero (0) for the fourth digit.

All other SIC codes are to be reported to 4 digits.

- 074 VETERINARY SERVICES
 - 0741 Veterinary services, farm livestock
 - 0742 Veterinary services, specialties
- 078 LANDSCAPE AND HORTICULTURAL SERVICES
 - 0781 Landscape counseling and planning
 - 0782 Lawn and garden services
 - 0783 Ornamental shrub and tree services
- 152 RESIDENTIAL BUILDING CONSTRUCTION
 - 1521 Single-family housing construction
 - 1522 Residential construction, nec
- 154 NONRESIDENTIAL BUILDING CONSTRUCTION
 - 1541 Industrial buildings and warehouses
 - 1542 Nonresidential construction, nec
- 421 TRUCKING, LOCAL AND LONG DISTANCE
 - 4212 Local trucking, without storage
 - 4213 Trucking, except local
 - 4214 Local trucking and storage
- 513 APPAREL, PIECE GOODS, AND NOTIONS
 - 5133 Piece goods
 - 5134 Notions and other dry goods
 - 5136 Men's clothing and furnishings
 - 5137 Women's and children's clothing
 - 5139 Footwear
- 581 EATING AND DRINKING PLACES
 - 5812 Eating places
 - 5813 Drinking places
- 651 REAL ESTATE OPERATORS AND LESSORS
 - 6512 Nonresidential building operators
 - 6513 Apartment building operators
 - 6514 Dwelling operators, excluding apartments
 - 6515 Mobile home site operators
 - 6517 Railroad property lessors
 - 6519 Real property lessors, nec
- 721 LAUNDRY, CLEANING, & GARMENT SERVICES
 - 7211 Power laundries, family & commercial
 - 7212 Garment pressing & cleaners' agents
 - 7213 Linen supply
 - 7214 Diaper service
 - 7215 Coin-operated laundries and cleaning
 - 7216 Dry cleaning plants, except rug
 - 7217 Carpet and upholstery cleaning
 - 7218 Industrial launderers
 - 7219 Laundry and garment services, nec

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 2
Rev. Oct. 1985INDUSTRIAL CLASSIFICATION STATEMENT
(FORM BLS-3023-A) -- Front

EXHIBIT 2-B.1

Bureau of Labor Statistics
Industry Classification Statement
All Industry

U.S. Department of Labor



The information collected on this form by the Bureau of Labor Statistics and the State agencies cooperating in its statistical programs will be held in confidence and will be used for statistical purposes only.

This report is authorized by law 29 U.S.C. 2. Your voluntary cooperation is needed to make the results of this survey comprehensive, accurate, and timely.

Form Approved
OMB No. 1220-0032
Approval Expires 12/31/85

OFFICE USE ONLY			
1972 SIC	Ownership	County Code	Aux

TO AVOID DUPLICATE MAILINGS, please return as soon as possible in the enclosed envelope, to the address below.

Telephone Number

A. This report will be used to ensure the proper industrial and area classification of the establishment(s) for which you reported employment and payroll data on the QUARTERLY EMPLOYER'S TAX REPORT under the unemployment insurance account number shown above.

Please complete all the questions on this form as completely and accurately as possible and return promptly. A brief description of your principal products or activities is usually adequate. However, the description should be sufficiently specific to permit us to place it in the proper standard industrial classification.

If in Agriculture, Forestry, or Fishing, specify the type of operation, principal product, or the service provided. If in Mining, specify the principal ore, liquid or gas mined or extracted and the process used or service provided. If in Manufacturing, specify the principal product, the process used, and the most important of the raw materials consumed. If in Transportation, Communication, or Public Utilities, specify your principal products or services in order of importance and the extent of your operations. If in Trade, specify the principal goods sold, the type of customer primarily buying your goods, and the method of selling. If in Finance, Insurance, and Real Estate, specify your primary business, extent of your operations, and any important major characteristic that influences your business, such as a FDIC bank. If in Services, specify your primary service, the type of operation, the principal type of customers, and skills workers use to deliver the service. If in Government, specify type of activity, principal service, and the level of government including Federal, State, Local, or International government.

B. Principal Products or Activities during most recent calendar year in this establishment(s)	Percent of total sales (value or receipts) this period	For State use	List below, opposite the corresponding product in Section 31, the principal materials used in the manufacturing of each product.	Was material used produced in this establishment?
1. Manufacturing (specify below)				Yes No
2. Nonmanufacturing (specify below)				

C. To whom are most of your products or services sold?		E. Is the establishment primarily engaged in performing services for other units of the company? ☐ Yes ☐ No	
1. ☐ General Public	4. ☐ Wholesalers	If yes, indicate nature of activity of this establishment.	
2. ☐ Retailers	5. ☐ Other (specify)	1. ☐ Central administrative office	
3. ☐ Construction Contractors		2. ☐ Research, development or testing	
		3. ☐ Storage (warehouse)	
		4. ☐ Other (specify)	

D. Is this establishment part of a multi-unit company?	
1. ☐ Yes	2. ☐ No
If no, skip to question H on the back of the form.	
If yes, enter name and location of controlling company on the space provided below and complete the questions on the back of this form.	

F. Type of ownership (check one)	
Private	Government
1. ☐ Corporate	3. ☐ Federal
2. ☐ Noncorporate	4. ☐ State
	5. ☐ Local
	6. ☐ International

INDUSTRIAL VERIFICATION FORM (FORM BLS-3023-B)
-- Front

EXHIBIT 2-B.2

Bureau of Labor Statistics
Industry Verification Form
All Industry

U.S. Department of Labor



The information collected on this form by the Bureau of Labor Statistics and the State agencies cooperating in its statistical programs will be held in confidence and will be used for statistical purposes only.

This report is authorized by law 29 U.S.C. 2. Your voluntary cooperation is needed to make the results of this survey comprehensive, accurate, and timely.

Form Approved
OMB No. 1220-0032
Approval Expires 12/31/88

OFFICE USE ONLY

1972 SIC Ownership County Code Aux.

TO AVOID DUPLICATE MAILINGS, please return as soon as possible in the enclosed envelope, to the address below.

Telephone Number

This report will be used to ensure the proper industrial classification of your regular QUARTERLY EMPLOYER'S TAX REPORT and should cover the entire activity of the same establishment for the most recent calendar year.

A.

B. Principal Products or Activities during most recent calendar year in this establishment	Percent of total sales (value or revenue) this period	For States use	List below, specify the corresponding product in Section 31, the principal materials used in the manufacturing of each product.	Was material used produced in this establishment?
				Yes No
1. Manufacturing (specify below)				
2. Nonmanufacturing (specify below)				

C. To whom are most of your products or services sold?

1. ☐ General Public 4. ☐ Wholesalers
2. ☐ Retailers 5. ☐ Other (specify) _____
3. ☐ Construction Contractors

D. Type of ownership (check one)

Private Government

1. ☐ Corporate 3. ☐ Federal 5. ☐ Local
2. ☐ Noncorporate 4. ☐ State 6. ☐ International

E. Is the establishment primarily engaged in performing services for other units of the company? ☐ Yes ☐ No

If yes, indicate nature of activity of this establishment.

1. ☐ Central administrative office
2. ☐ Research, development or testing
3. ☐ Storage (warehouse)
4. ☐ Other (specify) _____

F. Is this establishment part of a multi-unit company?

1. ☐ Yes 2. ☐ No If no, skip to question H on the back of this form.

If yes, enter name and location of controlling company on the space provided below and complete the questions on the back of this form.

BACK OF INDUSTRIAL CLASSIFICATION STATEMENT
and INDUSTRIAL VERIFICATION FORM

EXHIBIT 2-B.3

Enter in the section below, or on a separate page if necessary, the location and employment for each establishment in the State covered by this report. If activities vary for the separately reported establishments, provide product or activity information for each unit.

1. a. Street address	b. City	c. County	d. ZIP code	e. Average employment
	f. Principal economic activity			
2. a. Street address	b. City	c. County	d. ZIP code	e. Average employment
	f. Principal economic activity			
3. a. Street address	b. City	c. County	d. ZIP code	e. Average employment
	f. Principal economic activity			
4. a. Street address	b. City	c. County	d. ZIP code	e. Average employment
	f. Principal economic activity			
5. a. Street address	b. City	c. County	d. ZIP code	e. Average employment
	f. Principal economic activity			
6. a. Street address	b. City	c. County	d. ZIP code	e. Average employment
	f. Principal economic activity			
7. a. Street address	b. City	c. County	d. ZIP code	e. Average employment
	f. Principal economic activity			
3. Name of company official to contact if we have questions concerning this report				
Title		Address and Telephone No.		Date

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REQUEST FOR SIC CODING INTERPRETATION
(FORM SO-274) -- Front

EXHIBIT 2-C

Bureau of Labor Statistics
Request for SIC Coding Interpretation

U.S. Department of Labor



1. Name of Establishment and Location	UI Acct. No.	Employment (Mo., Yr.)
	Attachment:	☐ Product Statement
	☐ Other (specify)	
2. Coding Problem:		

Requesting Agency (or Program):	Classifier:	Date:		
3. SLS Regional Office Review:	☐ Returned to Requesting Agency	1972 SIC	Own.	Aux.
	☐ Referred to SLS-Washington			

	Reviewer:	Date:		
4. SLS-Washington Review:	☐ No code assigned	1972 SIC	Own.	Aux.
	☐ Code assigned			

REQUEST FOR SIC CODING INTERPRETATION
(FORM SO-274) -- Back

EXHIBIT 2-C

Instructions for Requesting and Processing SIC Coding Interpretations

REQUESTING AGENCY (OR PROGRAM)

Complete items 1-2 on face of this form as indicated below:

1. **Name and Location of Establishment:** Enter name of establishment for which coding interpretation is requested and its location (city, county, State). Enter UI account number and a recent employment figure. If further identification is necessary to differentiate establishments with same name, enter address.

Attachments: Attach product statement (no more than three years old) to original copy and check "product statement" box. If other attachments are included, check "other" box and identify them. Attachments should remain with the original.

2. **Coding Problems:** State the coding problem as clearly as possible and indicate why probable codes are not applicable. If information necessary to determine an SIC code is inadequate, do not request a coding decision. The description should be specific enough to classify the establishment. If in **Agriculture, Forestry, and Fishing**, specify the type of operation, principal product, or the service provided. If in **Mining**, specify the principal ore, liquid, or gas mined or extracted and the process used or service provided. If in **Construction**, specify whether general contractor or special trade and describe the activity and the trade involved. If in **Manufacturing**, specify the principal product and whether made in the same establishment or from purchased materials, the process used, and the most important raw materials consumed. If in **Transportation, Communication, and Public Utilities**, specify the principal products or services in order of importance and the extent of the operations. If in **Trade**, specify the principal goods sold, the type of customer primarily buying the goods, and the method of selling. If in **Finance, Insurance, and Real Estate**, specify the primary business activity, the type of operation, and if a factor in classification membership or nonmembership in FDIC, FSIC, Federal Reserve, FHLB, etc. If in **Services**, specify the primary service, the type of operation, the principal type of customer, and the skills the workers use to deliver the service. If in **Government**, specify the type of activity, principal service, and the level of government, including Federal, State, Local, or International government.

For classification, it is necessary to know whether or not an establishment is an auxiliary unit and the primary activity of the establishment(s) it serves.

BLS REGIONAL OFFICE REVIEW

The BLS regional office will review the coding request, complete section 3 of this form and take the following action:

Situation	Regional Office Action
1. SIC code can be determined by regional office.	Assign code and state basis of assignment, returning original to requesting agency and copy 1 to BLS-Washington, Division of Occupational and Administrative Statistics.
2. Inadequate information.	Return all copies to requesting agency indicating what additional information is needed for coding.
3. Regional office unable to determine SIC code despite adequate coding information.	Send original including attachments and copy 1 to BLS-Washington, Division of Occupational and Administrative Statistics for coding interpretation.
4. Receipt of Washington coding interpretation.	Send original to requesting agency which requested interpretation.

BLS-WASHINGTON REVIEW

BLS-Washington, Division of Occupational and Administrative Statistics will review coding requests received from the regional or other national offices, complete section 4 of this form, and take the following action:

Situation	BLS-Washington Action
1. SIC code can be determined by BLS-Washington with or without assistance of SIC Technical Committee.	Assign code and state basis of assignment, returning original to regional office for transmittal to requesting agency and photocopy for regional office.
2. Inadequate information.	Return request to BLS regional office stating what additional information is needed.
3. BLS regional office coding interpretations.	General review of these decisions. Product supplements will be requested for questionable decisions. Also, a review of all decisions will be made on a sample basis.

Section 3: SAMPLING

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Section 3: SAMPLING3.1 THE SAMPLE DESIGN3.1.1 Objectives of Sampling

The objective of sampling is to produce less costly and more timely results approximately equivalent to those which would be obtained from a complete enumeration. In addition, sampling imparts quality to results by virtue of the additional time available per report for classifying, editing, and tabulating a sample rather than the universe.

The sampling plan for the Current Employment Statistics program fulfills five important requirements:

- 1) Provides the framework for preparing reliable monthly estimates of employment, hours, and earnings.
- 2) Through a single general system, yields data in considerable industry detail for areas, States and the Nation. The needs of the national program differ from the needs of the States and the design must satisfy all of those needs.
- 3) Permits expeditious tabulation and publication of data.
- 4) Provides maximum accuracy at minimum cost. That is, the sample is efficient.
- 5) Be appropriate for the existing framework of operating procedures, administrative problems, legal provisions, and other institutional characteristics of the program. For example, employer reporting is voluntary in most States; therefore, the design must account for nonresponse.

3.1.2 Nature of the Sample DesignA. Introduction

The sample design developed for the Current Employment Statistics program covers most industries and meets the above objectives and requirements subject to three qualifications. The first is that, of necessity, the primary design was based on the needs of the national program. However, it also provides a framework within which State and area sample needs can be achieved. Secondly, the design was selected primarily for its efficiency in estimating employment, although it is also acceptable for hours and earnings. Finally, the chosen design, like any other procedure, is subject to tests of performance and improved theory. Alternative designs may, in the future, be found to be more suited to some industries or economic circumstances.

The primary design used for sampling establishments, is optimum allocation. In order to meet State and area sampling needs, a form of optimum allocation known as sampling proportional to employment is used. The principle of optimum allocation refers to the efficient and equitable distribution of the sample among different size-of-establishment groups. The purpose of this stratification is to arrange similar items into a group so that it is possible to take advantage of this similarity in selecting a sample, which is both efficient and equitable.

B. Description of Optimum Allocation to Employment

In stratified sampling, if the needed sample in each stratum is selected so as to minimize cost for a specified variance of the estimate, or to minimize the variance for a specified cost, then the sample is an optimum allocation sample. In general, optimum allocation assigns a greater sample to a stratum if the stratum has a greater number of units in the universe, if the stratum has high variability, or if the cost of sampling is less expensive in that stratum.

In the sample design at the National level for the BLS 790 survey, the cost of sampling each establishment was assumed to be constant, for simplicity of sample design.

Optimum allocation, used for the sample design at the National level in the CES program, determines the optimum number of establishments to be sampled in each size stratum, by using both the number of establishments in a stratum universe, and the standard deviation of establishments in that stratum's universe. (See Exhibit 3-A.)

An optimal allocation for one data type may not be the same as that for another data type. For simplicity of theory and design, the all employee estimate was assumed to be the most important of the estimates; therefore, the design is based on building an optimum design for all employees (AE), rather than determining the sample needed using average weekly hours (AWH), average hourly earnings (AHE), etc.

C. Description of Proportional Allocation to Employment

This method requires, first, that the universe of establishments for each industry be stratified into size classes on the basis of employment. Then, a total sample size necessary to produce satisfactory estimates of employment is determined and distributed among the size classes in each industry on the basis of both the average employment per establishment and on the relative importance of each size class to the industry. In practice, this is equivalent to distributing the

predetermined total number of establishments required in the sample among the cells on the basis of the ratio of the employment in each cell to the total employment in the industry. The likelihood that certain establishments will be selected is dependent upon their employment level. Large establishments are certain of selection (i.e., certainty size class) smaller establishments have less chance (i.e., noncertainty size classes). Within each cell, the establishments to be included in the sample are selected at random. Sampling ratios are then determined to aid in the selection process. (Exceptions to these procedures are discussed in Sec. 3.1.3.)

D. Application of the Sample Design

It is not feasible for BLS-Washington to develop a detailed sample design which would meet all the requirements for samples for all States, areas and the Nation. In reality, different industries themselves, regardless of the geographic level, will require different sample designs. For the national sample, Appendix G.1 specifies the proportion of units within each size class of an industry that is to be included in the national sample. The proportions are known as sampling ratios and must be used by each State in determining the national sample submittals. The national ratios represent the industry characterization (establishment size, SIC, etc.) at the national level and thus support the national estimates, which may not be adequate for State and area estimates. At the same time however, State and area sample needs are equally important such that there is an adequate representation of industry characterization at those levels.

Consequently, for State and area estimates, Appendix G.1 may have to be supplemented. For individual State and area samples, a series of formulas based on empirical evidence from the BLS 790 survey have been developed. (See Sec. 3.1.4.) These formulas are applied directly to State and area ES-202 data to develop unique sampling ratios for large and small States and areas. Proportional allocation provides a means of distributing the required percentage sample coverage that the State/area formulas yield.

There are several advantages to using this technique. It closely approximates a custom-designed sample by specifically meeting each State's and/or area's needs in terms of industry characterization and distribution. It is a limited aid in determining which line items to publish depending on the quality and quantity of the sample for a particular industry, because statewide and area estimates, and their samples, are usually determined separately. In terms of sample representation, it reduces large firm bias because it picks up smaller firms, and thus adequately reflects movement of all size classes, which is critical in State and area sampling as well as estimation.

Stratification by size gives relatively homogeneous groups from which a sample can be drawn and estimates made. When this technique is used in area sampling and estimation, it results in appropriate area estimates because sampling across size classes through the industries will be represented. The same holds true at the statewide level, if the sample is drawn from all areas, including the balance of State. Thus, proportional allocation to employment is an effective aid in reducing large firm, geographic, and industry bias. It provides a sample with a balanced representation of all size classes while continuing to give more weight to the larger establishments in the universe. It establishes a method in which every establishment in the universe has a mathematically established chance of being selected for the sample. Finally, proportional allocation to employment is cost-efficient -- it will yield the greatest, and most representative sample for the least cost. The stratification process often leads to a substantial reduction in the sample size when large and small firms are considered separately instead of selecting a completely unrestricted random sample of firms.

3.1.3 Characteristics of the Sample Design

The sample design used in the Current Employment Statistics program has the following characteristics which are common to all optimum allocation designs:

- 1) All of the largest establishments are included in the sample. For most industries, all establishments with 250 or more employees are sampled with certainty. For some industries, certainty sampling may begin at a lower level (i.e., establishments with 100 or more employees). The level which is chosen, the optimum stratification point, is that which will yield the most efficient sample.
- 2) The sample includes representation from most size classes in each industry (with the exceptions noted below).
- 3) Within each size class, the sample members are chosen at random.

For administrative and operational reasons certain modifications to this pattern have been made:

- 1) In some industries, samples with a larger percentage of universe coverage are required to provide adequate estimates at the State and area level than at the national level. Therefore, some establishments needed for State and area samples are not required for the samples at the national level. Nevertheless, reports for these establishments are transmitted in the usual fashion to BLS-Washington.

- 2) In general, sample designs developed under the optimum allocation principle for industry estimates must meet the requirement that the sample for a basic estimating cell contain a minimum of 15 establishments unless 75 percent or more of the universe employment is covered by the sample.

If there are insufficient sample data to meet these requirements, the cell is usually combined with a comparable SIC cell. This allows for the combination of similar products or services with sufficient sample to make an estimate. (See Sec. 10.3.1 for additional information on stratification).

3.1.4 Description of the Sample Design

A. The Sampling Frame

The sample is drawn from the Unemployment Insurance (UI) Master File which is stratified by size of firm. The sample is restricted to industries covered by UI because they are the only groups for which detailed information on reporting units by size of employment is available. Since 1978, about 98% of the universe employment is covered by UI.

The employee size classes used are: 0-9, 10-19, 20-49, 50-99, 100-249, and 250 and over. These are the same classes used by the State Employment Security agencies in stratifying the first quarter ES-202 data except that the first and last size classes are tabulated in more detail in the ES-202 (0-3, 4-9, and 250-499, 500-999, and 1000 and over).

Sampling formulas which will yield the required percent employment sample coverage at the National level as well as at the State and area levels are provided in Exhibit 3-A and Exhibit 3-B. These formulas are based on the principles of optimum allocation as modified by the constraints of the CES program. For the States and areas, because of the highly skewed distribution of the universe for most industries, it is necessary to provide two sets of sampling formulas to be applied to two mutually exclusive sets of industries. The first is applicable to industries, mainly in manufacturing, which have a large proportion of their employment in large establishments (i.e. those with 250 or more employees). The second is applicable to industries with most of the employment concentrated in small establishments (i.e. those with fewer than ten (10) employees). (See Exhibit 3-B.)

B. National Sample Design

The national algorithms as specified in Exhibit 3-A are used to determine the amount of sample needed at the national level to adequately reflect the universe employment distribution and make reliable estimates at that level. The derived required sample by size class is then translated into sampling ratios. As stated previously, the optimum number of establishments to be sampled in each size stratum is determined by using both the number of establishments in a stratum's universe, and the standard deviation of the establishments' employment in that stratum's universe. (See Exhibit 3-A.)

Appendix G.1 provides sampling ratios for each industry by each size class, which a State then applies to its universe to determine the sample that is needed by BLS-Washington. A State must meet Appendix G.1 requirements first in determining its sample needs. Ratios are applied at the most detailed level possible, even if several of these basic cells are combined into one estimating cell. The sum of the samples will insure adequate representation of all SIC and all size classes.

Sampling ratios are available at the 4-digit level except for those industries that are exempt from 4-digit SIC coding. There are certain other exceptions which are listed below:

1) Railroads (SIC 401). For the national series, a monthly complete count of employment for Class I Railroads is provided by Interstate Commerce Commission (See Sec. 8.8.3.)

2) Telephone Communication (SIC 481). The industry is dominated by the American Telephone and Telegraph Company, which supplies BLS and the cooperating State agencies each month with reports on employment, payroll and worker-hours for its entire operations. These reports, supplemented by reports from independent companies provide an adequate sample for employment, hours and earnings estimates at all geographic levels.

3) Telegraph Communication (SIC 482). This industry is dominated by a single company, Western Union Telegraph Company, which provides BLS with a single report each month on employment, payroll, and worker-hours for all of its operations.

4) Religious Organizations (SIC 866). This industry is excluded from coverage under UI programs, and there are no data available by establishment. Hence, no national sample design was developed. However, every attempt is to be made by the State to develop an adequate sample, primarily through the use of special surveys conducted by the State. (See Section 3.2.6.)

5) Federal Government. Although this industry is covered by the UI program (UCFE), the national employment estimate is the complete count of Federal government employment collected each month by the Office of Personnel Management (OPM). Hence no national sample design has been developed for this industry. As with any other industry though, States are to use the State and area formulas in Appendix G.4 to determine the necessary sample needed to make reliable State and area estimates for this industry. These sample reporters are then sent to BLS-Washington along with other State sample reporters.

6) Nonclassifiable Establishments (SIC 99). No sample design was developed for this small residual group. In the CES program no establishments are to be classified in this industry.

C. State and Area Sample Design

The State and area formulas as specified in Exhibit 3-B are used to determine the amount of sample needed at the State and/or area level to adequately reflect the universe employment distribution and make reliable estimates at that level. These formulas provide minimum sample requirements for large States and/or SMSA's with nonagricultural employment of 500,000 or more, and minimum sample requirements for smaller States and/or SMSA's with less than 500,000 employment (See Exhibit 3-B). The choice of which formula to use will depend on the size of the nonagricultural series and the character of the industry under consideration. These formulas will yield a required percent employment sample coverage from which the sample and sampling ratios by size class may be determined. (See the detailed procedure in Sec. 3.2.)

States must then compare these results to those obtained from Appendix G.1 since Appendix G.1 requirements specify national sample requirements and those requirements must be met first. If a State chooses to apply the State/area formulas at a higher level of aggregation than required by Appendix G.1, the component SIC sample requirements of Appendix G.1 can be aggregated and the total sample required at that level can be compared to the corresponding sample required by the State/area formulas at the same level. In some cases, the ratios provided by Appendix G.1 meet the State requirements as determined by the State formulas for estimating cells, and no additional sample is needed. However, in many cases, as in a very small State, Appendix G.1 ratios may be too large such that little or no sample is selected in the particular industry. The sample will meet minimum requirements for national submittals, but will not adequately represent the industry in that State. In this case, additional sample will be needed.

3.2 PROCEDURES FOR SAMPLE SELECTION AND SOLICITATION

3.2.1 Stratification of the Universe and Comparison with the BLS 790 Sample

For each industry the State agency lists the UI accounts for the first quarter of the year by sample size class (0-9, 10-19 employees, etc.) based on March employment. Then, the total number of accounts in each size class is determined. The accounts may be listed in any order within the size class (i.e., by UI account number, by employment size). The total number of accounts by size class is listed as well as the total employment generated by them. The average employment per size class is also listed since this is used in determining the distribution of employment when using the State and area formulas. (See Exhibit 3-C for possible format. States may make modifications as necessary.) These listings are best prepared in conjunction with a State's benchmark listings.

All establishments already included in the BLS 790 sample are checked against the above universe listing. The listing is corrected for industry classification differences between the UI and the BLS 790 at the level of industry detail shown by the listing. In addition, if a BLS 790 report covers only a portion of a UI report or if the UI report covers several BLS 790 reports, the list of UI reporting units is adjusted to place all BLS 790 reports in their proper size classes based on employment as reported to BLS. Thus, if a firm with 357 employees reported for only one (1) establishment with 52 employees, the BLS 790 report would be considered to be in the 50-99 employee size class, leaving a "residue" of 305 employees in the UI report which would still remain in the 250 and over employee size class.

If there were two or more BLS 790 reports which together did not cover the UI report completely, each of the BLS 790 reports is inserted in its proper size class on the universe listing as is the nonsample "residue". If BLS 790 and UI reports cover the same units, but reporting differences would place them in different size classes, the more accurate report is used. If the BLS 790 report is a combined report covering several UI reporting units, the firm is requested to supply BLS with the corresponding breakdown.

3.2.2 Determination of the Number of Establishments Required in the Sample

Since the requirements of Appendix G.1 must be met first by a State, that procedure will be presented first, followed by a procedure to be used with the State and area formulas.

A. National Sample Requirements

In Appendix G.1 a sampling ratio is provided for each industry cell. This ratio is in the form of a proportion of the number of universe units to be sampled at the Statewide level. If the sampling ratio is zero, this indicates that no sample establishments are required. The entry "1" indicates that all establishments in that size class cell are to be included in the sample. Any other ratio indicates that proportion of universe units that is to be included in the sample. The following table, based on Appendix G.1, illustrates this in detail.

Industry 35XX

Size Class	Sampling Ratio	Number of Reports to be Selected from Size Class
0-9	1/48	1 out of 48
10-19	0	None
20-49	2/15	2 out of 15
50-99	5/8	5 out of 8
100-249	1/5	1 out of 5
250 and over	1	Every Report

If the sampling ratio is one which has a numerator other than 1, the number of units required in the sample for the industry size cell is obtained by multiplying the total number of units in the cell by the fraction. For example, if the sampling ratio is 3 in 25 and there are 210 units in the size class cell, include 25 units in the sample. If the number of units in the cell were 224, then the number required for the sample would be 27 (round upward when the remainder is exactly .5 or more).

Within each size class, the units are then randomly selected. By applying the ratio in each size class for each industry level, all size classes and all industries will be adequately represented at the National level. These requirements are then summed to the appropriate higher level, if necessary, to compare to State sampling requirements.

B. State and Area Sample Requirements

In Exhibit 3-B and Appendix G.4, sampling formulas for different levels of employment and different industry characterizations are provided. These will yield a required sample employment coverage and ultimately the required distribution of sample reporters. The following instructions and example worksheets (Exhibit 3-C and Exhibit 3-D) will provide a guideline to sample determination.

1. Post the number of universe establishments, the universe employment, and the average employment per establishment by size class. (See Sec. 3.2.1) (Lines 1, 2, and 3 on the worksheet)

2. Determine the total noncertainty employment by subtracting the certainty size class from the total universe employment (Enter in Line 4). As noted earlier, this sample design emphasizes the selection of large units in the sample, i.e., the larger the unit, the more likely the unit will be selected. As a result, all of the large units (those in the 250+ size class) must be selected to be in the sample. This group is therefore called the certainty size class.

However, the State has the option to set this at a lower level, 100-249, if that is desired. In this case, the certainty employment would be all units over 100 or the sum of employment in size classes 100-249 and 250+. If there is no employment in either of these size classes, there will be no certainty size class and therefore, noncertainty employment and total employment will be the same.

3. The distribution of noncertainty employment by size class is then determined by obtaining the ratio (rounded to three decimal places) of each noncertainty size class employment to total noncertainty employment (Line 5). If there is no certainty size class, each size class is divided by total employment. These same distribution ratios will be applied later to the total desired sample so that the sample distribution reflects the universe employment distribution.

4. Determine the weighted proportions by multiplying the average employment in each size class by the corresponding distribution of employment in each size class (Line 3 x Line 5, rounded to three decimal places). The result for each size class is summed to obtain a total weighted proportion for the noncertainty size class (Line 6).

5. Determine the appropriate sampling formula to use. The choice of formula depends, first, on the level of total nonagricultural employment. Secondly, the sampling formula used also depends on industry characterization; therefore it is necessary to determine if an industry is characterized by large or small establishments. To do this compute the ratio of employment in each of the smallest and largest size class to total employment and compare the results. The larger of the two is the one that is dominant. If there is no employment in the largest or smallest size classes use the next largest and smallest size classes for comparison. For example, if there is nothing in the size class 250+, use 100-249. For industries characterized by small establishments, first look at the 0-9 class. If this class has nothing in it, proceed to the 10-19 class. (See the formula in Exhibit 3-B and Appendix G.4.)

6. Using the formula which applies to the proper characterization and employment size of the State/area, compute the percentage sample employment required, using the appropriate values for x_1 or x_2 . (For this computation, the x value is converted to whole numbers with 2 decimal places. Enter in Line 8.)

7. Determine the total required sample employment by multiplying the required percent employment (computed in Step 6 above, converted to four decimal places) by total UI employment. (Round to three (3) decimal places. Enter in Line 9.)

8. Determine the noncertainty sample employment required by subtracting the certainty size class employment from the total required sample employment computed in Step 7 above. (Enter in Line 10.) If there is no certainty size class, total employment will be used in the rest of the procedure.

9. The required noncertainty sample units are the number of units to be distributed among the noncertainty size classes. To determine this number, divide the total noncertainty sample employment (Line 10) by the total weighted proportion computed in Step 4 above. (Enter in Line 11.)

10. To determine the required units by size class, multiply the employment distribution ratio (Line 5) in each of those size classes by the total number of noncertainty sample units from Line 11. (Round to the nearest whole number. Enter in Line 12.)

11. The sampling ratio is determined by dividing the number of sample units required by size class by the number of universe establishments in its corresponding size class (Line 12 divided by Line 1). It is then replaced by the simple fraction which is nearest it in value. For purposes of comparison and simplicity in selection, replace it with fractions such as $2/3$, $3/4$, $2/5$, $3/5$, or $3/10$ or a fraction having a numerator of 1, whichever is closest in value. For example, .432 would be replaced by $2/5$. (Enter in Line 13.)

12. Check to see that the employment generated from this sample distribution technique is adequate by multiplying the sampling ratio by the universe employment in its corresponding size class. (Enter in Line 14.) Sum the various size classes and compare this total with the number required from Step 7 (Line 9).

13. Post the current number of BLS reporters in the estimating cell by size class. (Line 15)

14. Post the number of establishments required by Appendix G.1. (Enter in Line 16.)

15. Determine the number of units to be added by subtracting the number of units currently in the sample by size class from the total number of units required for that size class. The number of required units is determined by comparing the Appendix G.1 requirements and the State/area formula requirements, and using whichever value is higher. If the subtraction results in a negative number, post a zero since no additional units are required.

3.2.3 Selection of Sample Reports Needed

A. General Procedures

The sample for the industry must include all establishments which are currently reporting. For reasons of consistency, continuity, and economy, it is wise to retain an experienced respondent. Establishments already in the sample are indicated on the listing as described in Section 3.2.1. Once the number of reports needed in the sample of a size class cell has been determined as described in Section 3.2.2, the number of reports already in the sample are subtracted from that number. The remainder is the number of reports needed to complete the sample for the cell. For example, if in a given industry size cell the sampling ratio is 1 in 10, and there are 57 reporting units in the universe, 6 reports are needed for the sample for this cell. If there are 2 reporting units already in the sample, 4 reports must be added. These are selected at random from the units in the industry size cell after the elimination of the establishments already reporting. There are several ways of doing this. One way would be to select 4 random numbers not greater than 57. The reporting units corresponding to these numbers on the list are then selected for solicitation (unless one of the units selected is already reporting in which case another random number must be chosen). A simpler way is to use systematic sampling. This requires the use of a random "starting" number. A table of such numbers is given in Appendix G.2 for all possible sampling ratios from 1/3 to 1/100. To illustrate the principle of systematic sampling, note that in the example cited above that after the elimination of the 2 establishments already in the sample, 4 additional reports are to be selected from the remaining 55 for inclusion in the sample, that is, 1 in 14. Consulting Appendix G.2, the random starting number for 14 is 3. The nonreporters selected for sample solicitation are therefore the 3rd, the 17th, the 31st, and 45th. To be more explicit, suppose that out of the original 57 units in the universe, the 23rd and the 41st units as counted from the beginning of the list are already sample reporters, then the 3rd, the 17th, the 32nd (the 31st nonreporter) and the 47th (the 45th nonreporter) cases are selected for sample solicitation.

In the case of the sampling ratio 1/2, separate starting numbers are provided in Appendix G.2 for each major industry division. The list of

random starting numbers contained in Appendix G.2 may be used. However, a State may wish to develop its own list or use alternative procedures for random selection.

There are several books giving extensive lists of random numbers together with instructions for their use. Among them are:

Tables of Random Sampling Numbers, M.G. Kendall and B. Babington Smith (Tracts for Computers, No. XXIV, Department of Statistics, University of London, University College, Cambridge University Press, 1939).

A Million Random Digits with 100,000 Normal Deviates The Rand Corporation, The Free Press, Glencoe, Ill. 1955.

The general rules given above require modification when the sampling fraction is large, in particular, for those sampling fractions given in Appendix G.1 when the numerator is greater than 1 (e.g., $3/5$, $2/3$). For example, suppose a cell with 20 establishments in the universe had a sampling ratio of $2/3$, indicating a sample of 13. Dividing 13 into 20 gives a ratio of 1.54, or to the nearest whole number 2. Following the procedure outlined above, the number of establishments to be included in the above sample would be only 10. One method by which this dilemma can be overcome is to select 13 random numbers under 20 from a source of such numbers and to take the establishments corresponding to these numbers on the list as the sample. Another procedure is to use a modified form of systematic sampling. In our example, the 20 establishments in the universe would be divided into 6 groups of 3 establishments with a final group of two. From the three possible combinations of two different cases chosen from a total of three, a pattern is selected at random, say the first and third cases are selected for the groups of establishments. Then from each of the seven groups of establishments the first and third cases are selected for the sample giving a total in this instance of 12 establishments. Each group of three is treated as a separate entity. Establishments already reporting in each group are retained in the sample and only those additional reports are selected for solicitation that are needed to fill the "quota" for each group of reports. The application of this rule to various situations based on the example cited above is illustrated below:

- a) Group 1. Three establishments, A, B, C; none in the sample. Select A and C for the sample.
- b) Group 2. Three establishments, A, B, C; C already in the sample. Select A for the sample.
- c) Group 3. Three establishments, A, B, C; B, C in the sample. No additional reports required.

Selection patterns for the sampling fractions $2/3$, $3/4$, $2/5$, $3/5$, and $3/10$ are given in Appendix G.3. For each fraction, the pattern was selected at random from all possible combinations of items appropriate to the fraction.

The method described above may also be used with other large sampling fractions such as $1/2$, $1/3$, and $1/4$ using for each group, the appropriate random starting numbers given in Appendix G.2. For sampling fractions of $1/5$ or less the general method should be used.

B. Accounting for Nonresponse

In order to compensate for expected nonresponse, the list to be solicited must include more than the number of reports needed to complete the sample. This can be best effected by increasing the sampling ratios given in Appendix G.1. The amount by which the sampling ratios is increased can be based on State experience in previous sample expansion programs. Thus, if experience indicates that four establishments must be contacted to add one report to the sample, and for a certain size-industry cell, the sampling ratio listed in Appendix G.1 is $1/50$, then the required oversolicitation would be accomplished by the use of a sampling ratio of $1/12$ (4 times $1/50$ equals $1/12$, approximately). Another procedure is to make an original solicitation using the original sampling ratio given in Appendix G.1 and then to use oversolicitation on a second go-around to fill up the gaps. The necessary rates of oversolicitation can be determined from the results of the first round. Any past solicitation records that are available are to be used in this analysis. These detailed records of solicitation efforts are most valuable when maintained at the four-digit SIC level.

Oversolicitation must never replace the establishment and maintenance of a good follow up procedure. Also, sampling ratios in other size-industry cells should not be altered if nonresponse persists. If a State cannot meet the sample design as it is established by size class, a shift to adjacent size classes to capture the necessary units and employment is prohibited because of the possible introduction of bias and other negative effects.

3.2.4 Solicitation of Reports

A. General Procedures

After the necessary number of establishments has been determined, they are solicited for inclusion in the sample. If any of these establishments have been solicited previously without success, they are solicited again. This is particularly true of establishments in cells which are being sampled with certainty (i.e., with a ratio of 1). No

reports are to be solicited directly from companies having special reporting arrangements with the Bureau of Labor Statistics. (See Appendix D.1 and D.2). These requests are to be directed to the Regional Office.

B. New Sample Members

After possible new sample members have been identified, a letter requesting cooperation in the CES Program is mailed to each respondent along with the proper BLS 790 schedule. Forms other than the BLS-790 schedule are not to be used. The purpose of the letter is to get the attention and interest of the employer, describe the program, and generally encourage participation. The letter lists the uses of the data, the minimization of response burden, the confidentiality of the data, and possible benefit to the employer and the area. Include in the letter the name of a contact person for any questions and his/her telephone number, preferably a toll free number, as well as a recent publication if available.

A solicitation file is then established and maintained. This includes for each establishment to be solicited the establishment name, address, and SIC code as determined from UI records or other sources, and an indication as to whether the establishment is part of a multi-unit firm. The manner of solicitation contacts is recorded as well as the number of follow-ups and the response. There are at least three (3) mail follow-ups at two week intervals after the initial solicitation letter for firms which have not yet responded. A duplicate schedule is also included at some point with a follow-up letter, to insure response if the collection document has been mislaid. Other follow-up contacts may include phone or personal visits especially to those firms in the certainty size class. Again, detailed records are kept at the 4-digit SIC level (wherever possible) as to the method of initial contact and all follow-up contacts.

After a particular solicitation drive is ended, a summary of the results is prepared by a four-digit SIC providing a record of success in meeting the sample design. This includes such items as target response ratio, actual response ratio, and the total number of firms solicited, broken out by four-digit SIC. Those establishments which did not agree to report can then be placed in an inactive sample expansion file for reference in future expansion efforts. The information for establishments which did become respondents is recorded permanently and the new reporters are added to the sample after at least two consecutive months of successful reporting. (See Section 5.3.) All information is recorded on a BLS 790 schedule which is used as the collection document unless special arrangements are made with the respondent and approved by the BLS. In the latter case, the Regional Office must be contacted.

C. Resolicitation of Large Nonrespondents

In the largest size classes, 100-249 employees and 250 or more employees, the sampling ratio is frequently one (nearly always in the latter class). In the Current Employment Statistics program, instructions have generally called for inclusion of all establishments of these sizes in the sample. Hence, present nonreporters in these size classes are often establishments which refused to report in earlier solicitations. Nevertheless, in a program which produces current statistics on a continuous cycle, nonrespondents in cells where the sampling ratio is 1 should be resolicited on a periodic basis, preferably annually (i.e., when the general solicitation for new respondents is done). In many cases, there may have been special circumstances which accounted for their failure to respond; personnel may have changed or there may have been a change of policy by the company with regard to reporting. On the other hand, a modified approach may have occurred to the State agency which might now produce cooperation.

D. Addition of Reports to the Sample

All establishments solicited which agree to report are added to the sample. This may result in having more reports in a given industry size cell than are required by the sample design. However, the extra reports are probably needed for State or area estimates and to allow for attrition.

3.2.5 Sampling for Industries Not Covered by the Design

A number of industries are not covered by the sample design depicted in Appendix G.1. Most of these are excluded because detailed information on employment by size of establishment is not available whereby a sample design based on optimum allocation principles could be developed at the national level. These industries are those which are either completely or to a substantial extent excluded from UI coverage. SIC 866 is included in this group (See Section 3.1.4). If for the State and areas, virtually complete lists of establishments together with employment data for individual establishments are available for any of these industries, sample designs using optimum allocation principles may be developed for them.

The above instructions are applicable to State and local government as well as to Federal government except for Department of Defense. The special reporting arrangements between the Department of Defense and the Department of Labor are described in Appendix D.

In the absence of complete lists of establishments in the industries mentioned in this section, and if a State has exhausted all other alternatives, the State agency must try to get reports from the larger establishments known to it with the objective of covering substantial proportions of the employment in these industries.

3.2.6 Periodic Review and Evaluation of the Sample

Each year after the first quarter benchmark or ES-202 tabulation becomes available, the State agency compares the number of establishments in its sample with the number needed according to the sample design. The results of this comparison provide guidance as to the direction that sample expansion activities will take during the ensuing year.

Once a State has met the requirements of the national program (determined by the sampling ratios in Appendix G.1), it can concentrate on the important industries and/or areas of that State. Using the following established guidelines, it can decide which industries and/or areas to publish and then expand the national sample to meet the State's needs. If more detail is published, either by area or by industry, then more sample is needed in order to make valid estimates. An estimating cell must contain a minimum of 15 establishments unless 75 percent or more of the universe employment is covered by the sample (See Section 3.1.3). Rules for establishing publication level are found in Section 12. The State and area formulas are used in determining the sample size necessary to support these estimates and in determining the level of publication.

There are several empirical tools that can be used to evaluate a Statewide sample. One such tool is the percentage difference between the estimate level and the benchmark level. Estimating cells with large percentage differences are selected for sample supplementation. Another tool is to calculate the percentage employment revision with respect to the over-the-year change (See Sec. 11).

State samples are also evaluated in terms of bias. Identifiable biases occur in four ways: large firm bias, geographic or area bias, industry bias, and new establishment birth bias.

Small firms must not be excluded from the sample, either directly or indirectly. Although Appendix G.1 specifies all large firms (250 or more employees) for the national sample, a Statewide sample is determined by the industry and size composition at the State level. Again, random selection and size stratification are used to ensure the adequate representation of small firms and have them properly reflected in the estimates.

Area bias can be easily seen when an area's estimating cells are compared with statewide estimating cells. The statewide sample can, in fact, be a summation of area samples only if the areas completely exhaust the State or the industry. To the extent that this does not occur, the "balance of State" has failed to be adequately represented in a Statewide sample. Specifically, the Statewide sample units may seem adequate, however, when the area sample units and employment are reviewed, a strong geographic bias becomes evident.

For example, suppose an industry estimating cell is composed of sample from two SMSAs in the following manner:

Industry A		
	<u>Units</u>	<u>Employment</u>
SMSA 1	60	2,000
SMSA 2	20	1,000

When comparing the SMSA sample data to the Statewide industry universe, the universe was found to be comprised of 200 units with 6,000 employment. Consequently, the sample contains 40 percent of the units and 50 percent of the employment. That is a fairly good sample but still may not yield reliable estimates at the Statewide level. If Industry A is found in only those two SMSAs, the sample might be representative of the State. If this is not the case, there would be a biased State sample (i.e. the State would be represented by just two areas). Adjustments would have to be made to the sample to reflect the balance of State as well as the SMSAs in order to make reliable estimates.

Industry bias results from the manner in which the sample is selected. If there is a very broad industry aggregate for an estimating cell, all industries included in that aggregate may not be adequately represented. Random selection and size stratification are to be used to assure that all industries are adequately represented.

New establishment birth bias is due largely to the fact that new establishments have entered the universe since the benchmark period. The sample may reflect establishments going out of business but not those starting, and as a result, employment may be underestimated. In many industries the effects are minimal. In others, however, failure to adjust for new establishment births will impact the estimates significantly. (See Sec. 8.3.)

Exhibit 3-A

National Sample Design

Appendix G.1 provides sampling ratios for each industry by size class, for the required national level sample. Appendix G.1 was constructed using optimum allocation, except for agricultural services and the special industries noted in Section 3.1.4.B, as follows:

(1) All establishments in the 250 and above employment size classes are to be sampled with certainty.

(2) The number of establishments required in the sample for each 4-digit SIC and for those industries exempted from 4-digit coding, was determined using the following formula for each SIC.

$$n = \frac{(\sum N_s D_s)^2}{\left[\frac{e_2}{L} \right]^2 AE^2 + \sum N_s D_s^2} \quad (\text{Formula 1})$$

$$\left[\frac{e_2}{L} \right]^2$$

where n = sample needed at the SIC level for the noncertainty size classes

N_s = universe number of establishments in size classes for each SIC, determined from ES-202 data

D_s = the standard deviation for AE in size classes for each SIC

AE = the universe noncertainty February AE for each SIC from the ES-202 data

e_2 = the desired level of precision for the noncertainty universe estimate within "L" standard deviations of the noncertainty universe total AE of that SIC

The " Σ " sums over the noncertainty size classes, i.e., the below 250 AE size classes.

The formula was derived as follows:

- (a) The variance of the total population estimate with separate ratio estimate for each size stratum =

$$V = \Sigma \left[\frac{N_s (N_s - n_s)}{n_s} D_s^2 \right]$$

where: n_s = the sample in size class s

D_s = the standard deviation for AE in size class s ,
computed as:

$$D_s = \sqrt{\frac{\sum_{i=1}^{N_s} (Y_{si} - R_s X_{si})^2}{N_s - 1}}$$

with the summation $\sum_{i=1}^{N_s}$ over the N_s number of universe
establishments in size class s in that SIC where:

R_s = the ratio of March universe AE to February universe
AE in size class s

X_{si} = the February AE for the i th establishment in size
class s

Y_{si} = the March AE for the i th establishment in size
class s

- (b) With a given needed sample n at the industry level, assuming a constant cost for sampling each establishment, the optimum allocation formula,

$$n_s = \left[\frac{N_s D_s}{\sum N_s D_s} \right] n$$

is used to allocate the sample needed to the various size classes.

Substituting the formula for n_s into the formula for V , and solving for n determines n as:

$$n = \frac{(\sum N_s D_s)^2}{V + \sum N_s D_s^2}$$

with V as the desired variance in the AE noncertainty estimate for the SIC.

- (c) Substituting $V = \left[\frac{d}{L} \right]^2$ where L is the deviate

corresponding to the probability that the error d will exceed the desired margin, and letting $d = e \times AE$ where $e \times AE$ is some fraction e times the noncertainty universe AE for the SIC thus gives:

$$n = \frac{(\sum N_s D_s)^2}{\left[\frac{e}{L} \right]^2 AE^2 + \sum N_s D_s^2}$$

Since e is the desired level of precision for the certainty and non-certainty estimates combined, assume any error is in the noncertainty size classes entirely, so that e times (total SIC AE) = e_2 times (noncertainty AE):

$$\text{therefore } e_2 = e \times \left[\frac{\text{Total SIC AE}}{\text{noncertainty AE}} \right]$$

Thus, the value of e_2 used in Formula 1 varies for each SIC according to the proportion of AE in the 250 AE and above size classes.

- (3) Because of the difficulties in computing a variance from a very small universe, Formula 1 was applied to all industries with the following further restrictions:
 - (a) If the universe number of establishments in an SIC was less than or equal to 15, then sample all establishments in the universe.
 - (b) Sample at least 15 establishments for each SIC which has greater than 15 establishments in the universe.
- (4) Once Formula 1 is applied, then the needed sample n for each SIC was allocated across the noncertainty sample size classes according to:

$$n_s = \left[\frac{N_s D_s}{\sum N_s D_s} \right] n$$

where n_s is the needed sample in size class s .
Finally the n_s so determined were converted to the ratios in Appendix G.1.

- (5) Ratios were constrained to be not less than 1/100 (or 1.0 percent) as a precaution.

Exhibit 3-B
State and Area
Sampling Formulas

Size of NonAg series	Industries Characterized by:	
	Large Establishments	Small Establishments
States/SMSA's 500,000 or more	$y = .868x_1 + 19.47$	$y = 76.37 - 1.938x_2 + .0132x_2^2$
States/SMSA's Less than 500,000	$y = .795x_1 + 26.49$	$y = 81.37 - 1.938x_2 + .0132x_2^2$

where y = percent employment sample coverage

x_1 = percent of universe employment in largest size
class

x_2 = percent of universe employment in smallest size
class

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 3
Rev. Oct. 1985Exhibit 3-C
CES Sample Evaluation WorksheetState _____
Area _____
Estimating Cell _____
Date _____

	0-9	10-19	20-49	50-99	100-249	250 +	Total
1. Number of Establishments							
2. Universe Employment							
3. Average Employment per Establishment							
4. Total Noncertainty Employment							
5. Distribution of Non-Certainty Employment by Size Class							
6. Weighted Proportions							
7. Select and Apply Sampling Formula							
8. Percentage Sample Employment Required							
9. Sample Employment Required							
10. Total Noncertainty Employment Required							
11. Total Noncertainty Sample Units Required							
12. Sample Units Required by Size Class							
13. Sampling Ratio							
14. Sample Employment in Each Size Class							
15. Current Number of BLS Respondents							
16. Appendix G.1 Requirements							
17. Number of Units to be Added							

CES Sample Exhibit 3-D
Evaluation Worksheet
ExampleState _____
Area _____
Estimating Cell _____
Date _____

	0-9	10-19	20-49	50-99	100-249	250 +	Total	
1. Number of Establishments	125	72	42	33	21	9	302	
2. Universe Employment	574	1037	1445	2204	3289	6020	14569	
3. Average Employment per Establishment	4.6	14.4	34.4	66.8	156.6	668.9		
4. Total Noncertainty Employment	14,569 - 6020 = 8549							
5. Distribution of Non-Certainty Employment by Size Class	.067	.121	.169	.258	.385			
6. Weighted Proportions	.308	1.742	5.814	17.234	60.291		85.389	
7. Select and Apply Sampling Formula	$x_- = \frac{6020}{14569} = .4132$			$x_- = \frac{574}{14569} = .0394$		(Lg. State Lg. Estab		
8. Percentage Sample Employment Required	$y = .868 x_- + 19.47$ $y = .868 (41.32) + 19.47 = 55.34\%$							
9. Sample Employment Required	$.5534 \times 14,569 = 8062.485$							
10. Total Noncertainty Employment Required	$8062.485 - 6020 = 2042.485$							
11. Total Noncertainty Sample Units Required	$\frac{2042.485}{85.389} = 23.920 = 24$							
12. Sample Units Required by Size Class	2	3	4	6	9	9	33	
13. Sampling Ratio	1/65	1/25	1/12	1/5	1/2	1		
14. Sample Employment in Each Size Class	9	41	120	441	1645	6020	8276	
15. Current Number of BLS Respondents	1	2	2	6	8	9	28	
16. Appendix G.1 Requirements	0	2	3	8	7	9	29	
17. Number of Units to be Added	1	1	2	2	1	0	7	

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4.1 CONDUCTING A SYSTEMATIC SOLICITATION OF NEW REPORTERS

SYSTEMATIC SOLICITATION PROCEDURES ARE DESIGNED TO COLLECT QUALITY DATA AND TO MAXIMIZE RESPONSE RATES AT MINIMUM COST. INFORMATION MAINTAINED ABOUT THE SOLICITATION EFFORT IS USED TO MONITOR AND CONTROL THE SOLICITATION PROCESS AND LATER USED FOR PLANNING AND CONDUCTING FUTURE SOLICITATION PROGRAMS.

A. INTRODUCTION

Solicitation is, perhaps, the single most important process used to collect data and can determine the success of a survey. But the solicitation process often receives the least emphasis. The following pages will serve to clarify the importance of this aspect of data collection by providing procedures to enhance data collection efforts.

Employers receive a myriad of requests from both government and competing private interests. The ones which receive the most attention will depend in part upon the method of solicitation used.

The primary aim of solicitation efforts is to produce maximum response rates while maintaining a high quality of data. In directing these efforts to achieve maximum response, structured patterns of control should be developed. A structured approach will allow one to freely monitor the progress being made and to scrutinize the various techniques employed.

Some methods of solicitation are more effective than others. Although costs may vary widely, by using a structured method of control, one can make cost/benefit comparisons to find the most cost-effective method to suit the needs and budget of the survey. Procedures in this manual are designed to be most effective in an automated environment. It is expected that each State will use these uniform procedures as automation in solicitation is introduced.

The following section outlines a structured approach to developing methods of solicitation. Because some of the procedures may not seem appropriate in a specific State environment, the information is structured to be used intact, or it may be used to establish similar procedures by incorporating the objectives and concepts that follow.

B. WHAT ARE THE PURPOSES OF REGULAR SOLICITATION?

- . To add newly created units to the sample (births);
- . To capture the changes in industry composition; and
- . To replace units lost through sample attrition.

C. WHAT ARE THE OBJECTIVES OF STRUCTURED SOLICITATION PROCEDURES ?

- . Ensure a high response rate;
- . Maintain a high sample retention rate over a period of time;
- . Verify the initial quality of reported data;
- . Ensure the timeliness of monthly data; and
- . Monitor and evaluate the solicitation process.

D. BENEFITS OF STRUCTURED SOLICITATION

- . The solicitation process can be monitored and controlled uniformly;
- . The cost effectiveness of the solicitation process can be uniformly determined;
- . The response to the solicitation can be measured;
- . Analytical studies of the effectiveness of solicitation procedures can be made from the control information accumulated during the solicitation;
- . Comparisons using the various solicitation methods can be made and the information used in future solicitation efforts.
- . The quality of data can be initially verified.

4.2 THE SOLICITATION PROCESSING SEQUENCE

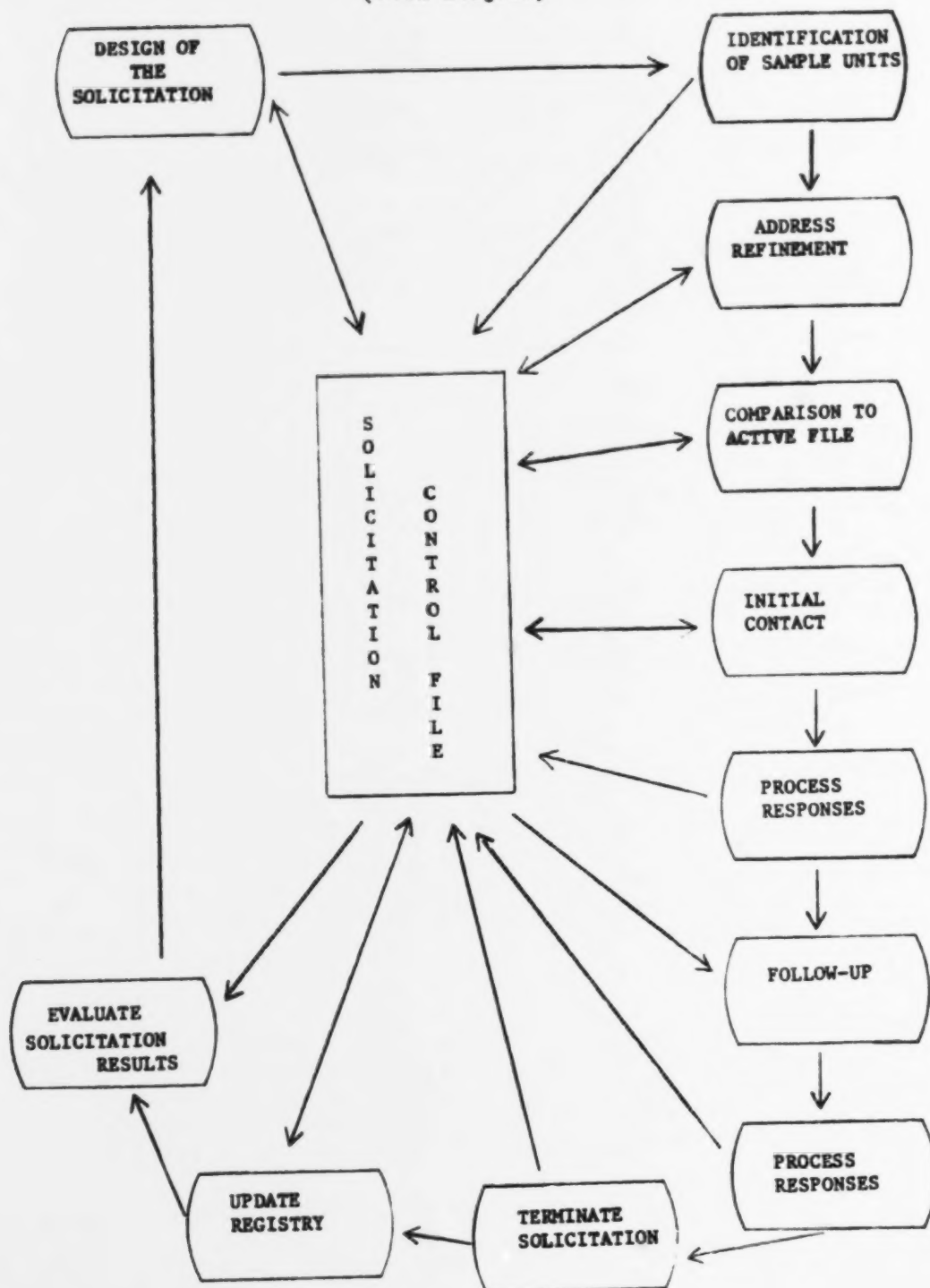
SOLICITATION IS A SERIES OF PREPLANNED ACTIVITIES PERFORMED WITH THE OBJECTIVE OF OBTAINING THE HIGHEST LEVEL OF RESPONSE FROM A SAMPLE AT THE LEAST COST, WHILE MAKING USE OF HISTORICAL INFORMATION TO EVALUATE THE RESULTS OF THE PROCESS.

The Solicitation Process consists of a number of activities:

- 1) DESIGN OF THE SOLICITATION. Plan what activities are to occur, when they will occur, and how they will occur. Construct a control system to retain processing status information that is needed to control the course of the solicitation, as well as evaluate the results of the solicitation.
- 2) IDENTIFICATION OF SAMPLE UNITS. Extract sample units from the sample source and record appropriate identification/classification information for each establishment.
- 3) SAMPLE REFINEMENT. Fully identify and record any necessary classification and address information for the sampled establishments.
- 4) COMPARISON WITH ACTIVE FILES. Compare the file of sampled establishments to the file of active reporters to check for possible duplications. Likewise, compare the sampled establishments to historical solicitation files for address and classification information.
- 5) INITIAL SOLICITATION CONTACT. Organize the initial establishment contact method and procedure. PROCESS and record the RESPONSES.
- 6) FOLLOW-UP. One or more follow-up contacts may be necessary to deal with nonresponse. Methods of follow-up contact will depend on initial contact method. PROCESS and record RESPONSES.
- 7) COMPLETE SOLICITATION. The solicitation of an individual establishment must be determined to be finished at some point, based upon either a definitive response or nonresponse after a predetermined number of collection attempts. The date of termination should also be recorded.
- 8) UPDATE THE REGISTRY. Add successfully solicited establishments to the active sample Registry file.
- 9) EVALUATE SOLICITATION RESULTS. Regardless of whether solicitation is a periodic or ongoing activity, results should be evaluated using historical records from the solicitation activity in order to improve subsequent solicitation efforts.

Exhibit 4-A

THE SOLICITATION PROCESS
(Flow Diagram)



4.3 THE CONTROL FILE -- CONTENTS

A SOLICITATION CONTROL FILE WILL STORE THE INFORMATION GENERATED BY THE SOLICITATION PROCESS IN A CENTRALIZED AND CONVENIENT WAY. THE AVAILABILITY OF THIS FILE ALLOWS SOLICITATION EFFORTS TO BE MANAGED SYSTEMATICALLY; ITS USE CAN IMPROVE AND MEASURE STATE SOLICITATION EFFORTS AND PROVIDE ANALYTICAL INFORMATION NEEDED TO EVALUATE THE COST-EFFECTIVENESS OF THE SOLICITATION PROCESS.

THE SOLICITATION CONTROL FILE PROVIDES FOR ESTABLISHMENT IDENTIFICATION AND CLASSIFICATION INFORMATION, ADDRESS AND ESTABLISHMENT LOCATION INFORMATION, AND SOLICITATION CONTROL INFORMATION. THE FILE IS DESIGNED TO BE MAINTAINED MECHANICALLY BUT CAN BE KEPT MANUALLY.

A. THE NEED FOR A CONTROL FILE

A systematic solicitation procedure calls for a structured information file. Information is stored in machine-readable form or on manually prepared and updated control cards. Regardless of the storage method, certain information about each establishment and its associated solicitation activities must be maintained.

If the complete information for each establishment isn't recorded in a standardized manner, no consistent measurement of success or effectiveness of a solicitation procedure can be made. With a systematic recordkeeping procedure, combined with a structured solicitation process, response rates should be maximized and a consistent measurement of the results can be calculated.

B. RETENTION OF SOLICITATION CONTROL FILE

Retain the complete control record for each establishment for at least 3 years following the solicitation effort. These historical files will allow the State to identify establishments which have been previously solicited. Historical files can also be used to evaluate the effectiveness of solicitation techniques over time.

C. CONTENTS

The following items are components of a solicitation control file. They represent information that is necessary for establishment identification and classification. They also represent information that will facilitate solicitation contact, and information about the contact and subsequent response that will allow for a systematic evaluation of the solicitation.

DESCRIPTION OF CONTROL FILE RECORDS

1. FIPS State Code (See Section 5.2.2.A)
2. Solicitation Control Number

This alpha/numeric control number is used to identify each establishment being solicited. Keep this numbering system separate from the report numbers assigned to regular CES reporting units.

3. SIC Code (See Section 5.2.2.C)
4. Ownership Code (See Section 5.2.3.E)
5. Key Reporter Code

A reporter that meets State criteria as a significant reporter for State estimates.

6. Auxiliary code (See Section 5.2.3.D)
7. Employment Size Code (See Section 5.2.3.G)
8. Benchmark Employment

Total number of reported employees, from the sample source. Compare this figure to employment reported by the respondent to insure that the intended establishment was contacted.

9. U.I. (Unemployment Insurance) Account Number (See Section 5.2.3.H)
10. E.I. (Employer Identification) Account Number

This is a unique identification number assigned by the Internal Revenue Service (IRS) to each company in the United States for identification and control purposes. It should appear on the U.I. files and can assist in matching various establishments of the same company.

11. Number of establishments

Record the number of establishments represented in the reporting unit. (If more than 99 establishments, enter "99.")

12. FIPS County Code (See Section 5.2.3.A)

4. FIPS Place Code. This 5-position numeric code allows identification of named populated cities, towns, villages, and such localized business centers as shopping malls and airports. Record this code if available. (See FIPS Publication 55, Codes for Named Populated Places and Related Entities of the States of the United States.)

14. Primary Company Name (See Section 5.2.3.I)

15. Secondary Company Name

This category is reserved for any additional or secondary name that the establishment might be doing business under. Sometimes this field is used to record "Attention to" information, such as "Payroll Department."

16. Contact Person

Record the name of a person to which mail or inquiries should be directed.

17. Street Address

Record the street address of the sample unit; avoid sending requests to P.O. Box addresses.

18. City and State

Record the City name and the alpha State abbreviation.

19. Zip Code (self-explanatory)

20. Establishment Location (See Section 5.2.3.J)

21. Telephone Number

Record the phone number, including the area code.

22. Sample Source Code

Record the source from which the sample unit is selected. The standard codes are:

- "1" - U.I. Records
- "2" - Previous CES Respondent
- "3" - Previous CES Solicitation
- "4" - Telephone Directory
- "5" - Business or Industrial Directory
- "6" - Other Surveys
- "7" - Other
- "9" - State-specific source

23. Sampling Procedure Code

- "1" - Sampling Procedures Described in Section 3 of CES State Operating Manual Was Used
- "2" - Sampling Procedures Described in Section 3 Not Used
- "9" - Not Available/Unknown

24. Contact Code

This code indicates the type of initial solicitation contact. Each type of initial solicitation contact should be accompanied by a CES survey form. These codes are also used to indicate follow-up contact. Follow-up contact may or may not be accompanied by a survey form.

- | | |
|----------------------|---|
| "1" - Mail | "6" - Phone Prenotification With Personal |
| "2" - Certified Mail | - Visit Data Collection |
| "3" - Phone Contact | "7" - CATI (Computer Assisted Telephone |
| "4" - Personal Visit | - Interview) |
| "5" - Phone | "8" - Other |
| Prenotification | "9" - Not Available/Unknown |
| With Mail Data | |
| Collection | |

25. Contact Date

Enter date of initial solicitation contact. Enter month followed by day followed by year (MMDDYY).

26. First follow-up Code

See "Contact Codes" above. Enter code pertaining to the first instance of follow-up contact following the initial solicitation contact.

27. First follow-up Date

Enter 1st follow-up date (MMDDYY).

28. Second (or most recent) Follow-up Code

See "Contact Codes" above. Enter code pertaining to the second or most recent contact following the initial solicitation contact.

29. Second (or most recent) Follow-up Date

Enter date of Second or most recent follow-up contact (MMDDYY).

30. Number of follow-ups

Indicate the total number of follow-ups performed for this reporter.

31. Response Code

Use these codes to record the newly solicited employer's response to solicitation or follow-up. (Note that this response coding scheme allows information to be recorded at the aggregate one-digit or at a detailed two-digit response code level.)

- "00" - Nonrespondent (no response received; conduct follow-up)
- "10" - Clarification pending (unusable response; awaiting clarification from respondent)
- "20" - Refusal (respondent overtly refused to cooperate, in writing, in person, or by phone)
 - "21" -----Will respond only if mandatory but information is readily available
 - "22" -----Data is maintained but is not readily available
 - "23" -----Respondent lacks time but information is readily available
 - "24" -----Data is not available in records
 - "25" -----Data is readily available but is confidential
 - "26" -----No reason given for refusal
 - "27" -----Other reason for refusal
 - "28" -----Administrative refusal -- do not contact in future solicitations
 - "29" -----State-specific use
- "30" - Post Office Return (nonmailable -- correct address for unit cannot be located)
- "40" - Out-of-Scope
- "50" - Out-of-Business
- "60" - Unusable Response (Reported data do not meet CES definitions and cannot be reconciled with respondent)
- "70" - Duplicate
 - "71" --Unit already active in CES program
 - "72" --Sample unit selected more than once in this solicitation panel
- "80" - Nonrespondent (No response after two follow-ups)
- "90" - Usable Response
 - "91" ----- One month
 - "92" ----- Two months
 - "99" ----- Respondent added to the State and National Registry

32. Response Date

This is the date the most recent response was received. The response is entered in the "Response Code" field, item 31. Enter the date (MMDDYY).

33. Transfer Date

Enter the date the record is entered onto the State's registry as an active reporter (MMDDYY).

34. Solicitation Termination Date

The date the solicitation process for an establishment is terminated should be entered here (MMDDYY).

35. Mail Code

Indicate length of payroll period, as an indicator of when to remail the BLS-790 shuttle form.

- "1" = Weekly Payroll
- "2" = Semi-monthly Payroll
- "3" = Monthly Payroll
- "4" = Mixed Payroll
- "5" = Other

36. Filler Spaces

Extend record length as needed to include State-specific codes.

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 4.3.D
Rev. Oct. 1985D. UNIFORM RECORD FORMAT

A uniform record format for mechanical storage provides convenient input and output access; it also facilitates the generation of statistical reports that can improve management analysis of solicitation efforts. The following record format shows necessary field lengths for each item in the solicitation control file. Only those codes pertinent to a State solicitation should be maintained.

Exhibit 4-B

Standard Solicitation Record Format

<u>Field Label</u>	<u>Field Length</u>	<u>Record Position</u>	<u>A/N*</u>
1. FIPS State Code	2	1-2	N
2. Solicitation Control #	5	3-7	A/N
3. SIC Code	4	8-11	N
4. Ownership Code	1	12	N
5. Key Reporter Code	1	13	N
6. Auxilliary Code	1	14	N
7. Size Code	1	15	N
8. Benchmark Employment	6	16-21	N
9. U. I. Account Number	11	22-32	A/N
10. E. I. Account Number	10	33-42	A/N*
11. No. of Establishments	2	43-44	N
12. FIPS County Code	3	45-47	N
4. FIPS Place Code	3	48-50	N
14. Primary Company Name	30	51-80	A/N
15. Secondary Company Name	30	81-110	A/N
16. Contact Person	15	111-125	A/N
17. Street Address	25	126-150	A/N
18. City and State	25	151-175	A/N
19. Zip Code	5	176-180	N
20. Establishment Location	12	181-192	A/N
21. Telephone	10	193-202	A/N
22. Sample Source Code	1	203	N
23. Sampling Procedure	1	204	N
24. Contact Code	1	205	N
25. Contact Date	6	206-211	N
26. Follow-Up Code	1	212	N
27. Follow-Up Date	6	213-218	N
28. 2nd Follow-Up Code	1	219	N
29. 2nd Follow-Up Date	6	220-225	N
30. Number of Follow-Ups	1	226	N
31. Response Code	2	227-228	N
32. Response Date	6	229-234	N
33. Transfer Date	6	235-240	N
34. Solicitation End Date	6	241-246	N
35. Mail Code	1	247	N
36. Filler	13	248-260	Blank

*Alpha/Numeric

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 4.3.E
Rev. Oct. 1985E. A MANUAL FORMAT FOR THE SOLICITATION CONTROL FILE

A manual format for the storage of control file information can be set up so that it is keypunch compatible. One type of manual format is the storage of solicitation control file entries on 4" by 6" cards.

Exhibit 4-C

SCH. CONTROL #	PRIMARY COMPANY NAME	
SIC*OWNERSHIP	BENCHMARK EMPLOYMENT	NUMBER OF ESTABLISHMENTS
U.I. ACCT. #	CONTACT AND RESPONSE STATUS	
E.I. ACCT. #	DATE	INITIAL CONTACT TYPE
SIZE CLASS	DATE	1st FOLLOWUP TYPE
KEY REPORTER	DATE	2nd FOLLOWUP TYPE
AUXILIARY STATUS	DATE	RESPONSE STATUS

SIDE 1

ADDRESS, LOCATION, AND CONTACT INFORMATION		
SECONDARY COMPANY NAME		NUMBER OF FOLLOWUPS
STREET ADDRESS		SAMPLE SOURCE
CITY, STATE AND ZIP		SAMPLING PROCEDURE
LOCATION	TELEPHONE	
CONTACT PERSON		TRANSFER DATE
FIPS CNTY CODE		SOLICITATION TERMINATION DATE

SIDE 2

4.4 PERFORMING SAMPLE REFINEMENT

THE PURPOSE OF SAMPLE REFINEMENT IS TO IDENTIFY THE LOCATION OF A SAMPLE UNIT SO THAT THE SURVEY SCHEDULE WILL BE SENT TO THE PROPER ESTABLISHMENT. THE ACCURACY OF THE ADDRESS INFORMATION WILL ENSURE THE MAXIMIZATION OF RESPONSE RATES AND THE MINIMIZATION OF RESPONDENT BURDEN. ACCURATE INDUSTRIAL, GEOGRAPHIC, AND EMPLOYMENT SIZE CODING WILL PROVIDE REFERENCE INFORMATION FOR VERIFYING THE ACCURACY OF THE REPORTED DATA.

A. THE NEED FOR ESTABLISHMENT IDENTIFYING INFORMATION

The sample source may not provide sufficient information to ensure contact of a unique establishment. It is important that current CES reporters not be resolicited accidentally. It is also important that addresses and employer classification assignments be current and complete. Thus, sample refinement is an essential part of solicitation.

B. THE PURPOSE OF SAMPLE REFINEMENT

All sample units undergo refinement to identify the proper collection unit. Each unit is reviewed for completeness of address, compared with previous solicitation files, and, where information is available, the address should be matched to independent address reference files, such as other survey files.

Sample refinement is the process of reviewing establishment information drawn from the sampling source to do the following:

- . Identify specific establishment locations from multi-unit's;
- . Verify that the firm is still in business;
- . Provide any missing address or classification components;
- . Update given addresses to reflect current addresses;
- . Identify and separate companies with special reporting arrangements, such as those requiring central office clearance.

Sample refinement is done to verify the address of a potential respondent, so that a maximum number of schedules can be sent directly to the establishments. Many surveys have suffered from poor response rates because appropriate sample refinement was not done.

C. SUGGESTIONS FOR SAMPLE REFINEMENT

- . Compare the sample file with the active CES reporters file to prevent resoliciting an active reporter.
- . Compare the sample file with sample files of other establishment surveys performed by the agency, as a source of additional -- or more current -- address and classification information.
- . If address information is missing or is not current, check other references for missing information.
- . Sort the File alphabetically by Primary Company Name or numerically by SIC to group reporters for review. Sorting a file alphabetically requires adopting standard rules for alphabetizing (see Section 5).

D. REFERENCES

As various sources may not contain all of the needed information about an establishment, more than one source of establishment identifying information should be used whenever possible. Various sources include:

1. State U.I. file

The information on the State U.I. File is invaluable for researching information on the identification of the establishment.

2. The FIPS Geographic Publications

These publications can be used to determine the county or other area names.

3. Business Directories

A business directory, such as Dun & Bradstreet, contains names and addresses of businesses with industrial identification and sometimes with establishment locations identified.

4. Telephone Directories

Use telephone directories to confirm or to complete names, addresses, and telephone numbers; they are a source for current addresses of establishments, once the general location is known.

5. State Business Directories

Research State-prepared manufacturing or industry directories, if available.

6. Other State Surveys

Refer to Address Files prepared for other surveys.

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4.5 EMPLOYER CONTACT TECHNIQUES

SEVERAL METHODS OF EMPLOYER CONTACT ARE AVAILABLE. EACH METHOD HAS ADVANTAGES AND DISADVANTAGES. THE CHOICE OF EMPLOYER CONTACT WILL DEPEND ON A NUMBER OF FACTORS, SUCH AS RESOURCES AVAILABLE, SIZE OF THE SAMPLE, INITIAL OR FOLLOW-UP CONTACT, AND PREVIOUS EXPERIENCE WITH THE TYPE OF ESTABLISHMENT SOLICITED.

Several variations of employer contact have proven effective in different States, illustrating the value of alternative employer contact techniques. Three techniques currently used are mail, telephone, and personal visits.

The choice or mix (split-sample test) of employer contact methods will depend upon a number of factors, such as resources available, order (initial or follow-up) of contact being solicited, the importance of the firm in the sample, and the type of establishment solicited. This section discusses these contact methods.

4.5 EMPLOYER CONTACT TECHNIQUES

- 4.5.1 MAIL CONTACT
- 4.5.2 TELEPHONE CONTACT
- 4.5.3 COMPUTER-ASSISTED TELEPHONE INTERVIEW (CATI)
- 4.5.4 PERSONAL VISIT
- 4.5.5 PERSONALITY TRAITS OF INTERVIEWERS

4.5.1 MAIL CONTACT

BY ITSELF, MAIL CONTACT IS GENERALLY THE MOST EXPEDIENT METHOD OF CONTACTING LARGE NUMBERS OF EMPLOYERS SIMULTANEOUSLY; HOWEVER, IT IS THE LEAST EFFECTIVE WITHOUT COMBINED FOLLOW-UP.

MAILING SHOULD BE DICTATED BY THE AVAILABILITY OF RESOURCES. THE MAILOUT PACKAGE (DISCUSSED BELOW) IS DESIGNED WITH THE RESPONDENT IN MIND. USE OF CERTIFIED MAIL CAN STRESS THE IMPORTANCE OF THE SURVEY. CONSIDER THAT THE ADDITIONAL COSTS OF "CERTIFIED MAIL" MAY BE OFFSET BY IMPROVED RESPONSE.

A. ADVANTAGES

- . The procedure is inexpensive to initiate
- . A large sample can be simultaneously contacted
- . "Out of Business" and incorrect address can easily be eliminated
- . Certified mailing can be used to emphasize the importance of solicitation and has been effective for large establishments and for industry/size groups with normally low response rates
- . Mailout and responses can be efficiently monitored

B. DISADVANTAGES

- . Mail is an impersonal medium; it is generally easier for a respondent to reject a letter request
- . The request may not reach the right establishment (because of an incorrect address)
- . The solicitation package may not reach the proper person in the establishment.
- . Requires extensive paper handling

C. PERFORMING A MAILOUT

1. What to Mail

The content of the solicitation mailout package is important because it may be the first time the respondent sees or reads information concerning the CES program. In all cases, it is important that the contents of the package are clearly written so that they facilitate a positive response. Contents of the mailout package should include:

- a personalized letter of introduction (see Section 4.6.1)
- a BLS 790 schedule and a duplicate BLS 790 schedule for the employer's files
- a postage paid return envelope
- an introductory pamphlet or flyer (see Section 4.6.2)

2. Schedule preparation

Schedules are available in standard or pinfeed versions. Adequate stocks to fill solicitation needs should be ordered well in advance of the planned solicitation. Requests for supplies of pinfeed schedules can only be filled once a year (for additional information, see Section 4.5).

For mailing efficiency and standardization, the following information should appear on the address label (mechanically encoded or otherwise):

STATE	CONTROL #	SIC	COUNTY	PRECODED EMPLOYMENT
XX	XXXXX	XXXX	XXX	XXXXXX

Primary Company Name

Secondary Company Name or Attention To:

REPORT FOR: (enter establishment location)

Street Address

City, State, and Zip Code

-- Return address and telephone number; and

-- Computer message: "PLEASE RETURN ONE COPY AND RETAIN A
COPY FOR YOUR FILES"

The precoded information will aid in controlling and in verifying the identify of the establishment and the accuracy of any reported data. (The coded information should not be titled; it is for the State's processing use only) 

Postal regulations require that the ZIP code must be the last entry in the address information, so place the "REPORT FOR" information after the secondary company name line.

3. When to Mail

Mail the solicitation package so that it reaches the establishment when the information is most likely to be available for the reference period. This often will be on or about the last day of the calendar week which includes the 12th of the month.

4.5.2 TELEPHONE CONTACT

TELEPHONE CONTACT IS MORE PERSONAL, BUT REQUIRES EXPERIENCED STAFF.

A. ADVANTAGES

- . Procedure serves to establish a direct, personal contact
- . Information can be collected and confirmed faster than in mail surveys
- . If the respondent has a problem with the instructions, questions can be quickly answered, and problems clarified
- . Allows direct data entry and editing of the data while still on the phone with the respondent, if an interactive computer data entry system is used.

B. DISADVANTAGES

- . Requires a trained staff dedicated to solicitation activities
- . It is time-consuming to obtain telephone numbers if they are not readily available
- . Cost of long-distance phone calls may be prohibitive

C. TELEPHONE PRENOTIFICATION WITH MAIL CONTACT

Combined telephone prenotification with mail solicitation is much more effective than mail-only contact. A staff person should telephone the establishment to notify them that a survey schedule will be placed in the mail and should be arriving within a few days (the schedule should be accompanied by the additional components of a mailout package, as described in Section 4.5.1.C). This occasion may also be used to describe the survey, stress the importance of the survey and of the employer's response, and answer any questions. The name of the appropriate person to direct the BLS-790 form can be determined at this time. The name of this person (the contact) should then appear on the mailing envelope.

D. TELEPHONE CONTACT GUIDELINES

1. Phone calls prior to mailing the initial collection form.
 - a. Introduce yourself and explain that you represent BLS.
 - b. Ask to speak with the person most familiar with employment and earnings for the establishment; e.g., the payroll department.
 - c. Introduce yourself, the State, and BLS to your contact.
 - d. Explain the purpose of the CES survey.
 - e. Explain that you will be sending a report form to the contact to be completed and returned.
 - f. If contact's reaction is negative, ask if you can send the form and written explanation for their examination before they decide whether to participate.
 - g. Confirm the establishment's mailing address and industry activity. Be sure to write down the contact's name and phone number.
 - h. Give the contact your phone number in case any questions come up when they begin completing the report form.
 - i. Thank the contact for taking time to listen, and for participating in the survey.
 - j. Address the survey package to the contact person.
2. Follow-ups by telephone
 - a. Introduce yourself and your agency.
 - b. Ask to speak with someone who would be familiar with a survey form that you recently sent the establishment concerning employment and earnings information for the establishment.
 - c. Introduce yourself, your agency, and BLS to this contact.
 - d. Explain that you recently sent a CES form to the company requesting its participation in the Current Employment Statistics survey. Did they receive it? Did they fill it out and return it? If yes, thanks. If no --
 - e. Explain purpose of the program and the importance of their participation.
 - f. If they have the form at hand, ask if they have any questions, and volunteer to assist them with completing the form.
 - g. If they don't have a form, confirm their mailing address and offer to send another form to the attention of the contact.
 - h. If they refuse to participate, thank the contact and code the establishment as a refusal.
 - i. If the contact hedges, offer to send another form and let them decide whether to respond after reviewing the form.
 - j. Give the contact your phone number in case any questions arise when the establishment begins filling out the form.
 - k. Thank the contact.

4.5.3 COMPUTER-ASSISTED TELEPHONE INTERVIEW (CATI)

COMPUTER-ASSISTED TELEPHONE INTERVIEW (CATI) COMBINES AN INTERACTIVE COMPUTER WITH A TELEPHONE FOR TELEPHONE INTERVIEWING. AS AN ALTERNATIVE TO TRADITIONAL METHODS OF INTERVIEWING, CATI PRESENTS MANY ADVANTAGES.

What is CATI?

With an interactive computer system connected to the phone system, CATI provides online telephone interviewing. The interviewer sits in front of a video display terminal wearing a telephone headset. Interview questions are stored in the CATI system and are displayed on the screen for the interviewer to read to the respondent over the phone. As the respondent answers, the interviewer keys the answers directly into the computer through a keyboard. Precoded or numeric entries may be edited for range and consistency before proceeding to the next question or case. CATI brings together all of the separate survey tasks and meshes them into one working unit.

Advantages and Benefits of CATI

CATI combines the advantages of telephone interviews with an online computer prompting system. This system allows data to be entered, verified, and corrected during the phone call.

CATI offers a number of potential benefits to survey processing and procedures. Some of these benefits are listed below:

- . Compared to personal visits, CATI reduces the operating cost of a survey. CATI eliminates travel cost, reduces administrative overhead, and reduces the amount of data cleaning.
- . CATI improves the timeliness of a survey. A survey can be completed in a shorter period than a personal visit, a mail survey or even a regular telephone survey because the data processing step is combined with the data collection step.
- . CATI improves data quality by standardizing procedures and interview questions. As a result there is less interviewer variance.
- . CATI improves response rates. The CATI system gives interviewers more opportunities to attempt to contact respondents.
- . CATI provides direct control of the data collection procedures by standardizing the interview data and recordkeeping functions.
- . CATI reduces the time required for data collecting and processing.
- . CATI assists the supervisor in monitoring the interviewer and the survey progress.

EXHIBIT 4-DTYPICAL FEATURES OF A CATI SYSTEM

- SAMPLE MANAGEMENT** : Sample is stored in the computer; the system rather than the interviewer maintains the status of each sample case. Interviewers request cases by control number or coded status.
- DATA COLLECTION** : Online interviewing combines all aspects of data collection: keyentry, editing, coding, and review.
- DATA QUALITY** : System controls branching or skipping to the next question based on logical or arithmetic tests of a prior answer or input data.
- RECORD KEEPING** : The system maintains records of online calls, their outcomes, response rates, and interviewer productivity.
- AUTOMATIC CALL SCHEDULING** : The system selects the cases to be called based on appointments or availability of interviewers.
- SURVEY MANAGEMENT** : System determines when a case is completed or if it requires supervisory review.
- CLEANING AND VERIFICATION** : System provides online editing of reported data based on sets of permissible values, ranges, or by logical or arithmetic operations.
- INTERVIEWER SUPERVISION** : The system allows for close monitoring of the interview process at a supervisor's terminal.
- STANDARDIZATION OF PROCEDURES** : System provides standardized interviewer instructions, questions, prompts and response categories, reducing interviewer variance.
- PREPARATION OF OUTPUT FILES** : The system prepares output files for next stage of processing; e.g., coding, data analysis, publication, etc.

4.5.4 PERSONAL VISIT

A PERSONAL VISIT (PV) IS THE MOST EXPENSIVE METHOD OF CONTACT BECAUSE OF THE TRAVEL INVOLVED. HOWEVER, A PERSONAL VISIT IS ONE OF THE MOST EFFECTIVE PROCEDURES FOR OBTAINING EMPLOYER COOPERATION. THE STAFF MEMBER WHO VISITS AN ESTABLISHMENT MUST BE CAPABLE OF PROVIDING INFORMATION ABOUT THE SURVEY PROCEDURES AND THE USES OF THE DATA.

A. ADVANTAGES

- . Highly effective if interview staff is well trained
- . Immediate feedback from respondent enables staff member to answer questions, explain the survey, etc.
- . Refusals are less likely with a direct, personal contact, thereby increasing the response rate
- . Develops a well-trained, public relations-oriented staff

B. DISADVANTAGES

- . Most expensive contact due to amount of staff time and travel involved
- . Staff must be highly trained

C. PHASES OF A PERSONAL VISIT

1. Preparation for the Interview

- a. Send a prenotification letter with a BLS-790 form to the establishment. Indicate that someone will call to arrange an interview and to assist with completing the schedule.
- b. Organize sample units according to geographic location to set up interviews in order to minimize travel.
- c. Call and make the appointment within one week after mailing the prenotification letter. Refer to the prenotification letter during the telephone call and establish a contact person for the interview. At this time, complete an interview instruction sheet indicating the date, time, and any specific instructions for conducting the interview. (Omit this step if the appointment was arranged prior to mailing the solicitation package).
- d. Interviewing is done most efficiently when one is prepared and confident; therefore, be sure to obtain any background information on a company and its products before conducting an interview.

2. Introducing Yourself to the Establishment

- a. The first 15-20 seconds of a phone call or personal visit can make or break an interview. Interviewers should be neatly and professionally dressed for a PV. The interview introduction should be prepared in advance.
- b. In the opening statement, identify yourself, your State agency, and BLS (show identification at this time). Request to speak with the contact named on the interviewer sheet.

3. Introducing the Purpose for the Interview
 - a. Explain the purpose of the interview and define the specific information you are seeking.
 - b. Make reference to any previous prenotification letter(s) and telephone contact if appropriate.
 - c. Make request for the data.
 - d. Try to spark interest of respondent.
 - e. Attempt to show the contact person how the company can use the statistics and analysis generated from the CES survey. Describe the State and national publications that are available. Leave publications if on hand.
 - f. Emphasize confidentiality and voluntary nature of survey.
4. Data Exchange -- the heart of the interview
 - a. Ask contact to provide information needed for the reporting form.
 - b. Clarify questions on definitions, pay periods, exclusions, etc.
 - c. Verify contact's understanding by repeating or rephrasing questions or answers.
 - d. Be sure the form is complete; if any information is unavailable, write down the reason why.
 - e. Remain neutral, if possible, during the interview regarding unsolicited comments made by the respondent.
5. Summary -- drawing the interview to a close
 - a. Review highlights of the interview -- the purpose of the interview and what was accomplished.
 - b. If the data were collected relatively easily, with a minimum of effort on the contact's part, point this out as an assurance that continuing to report monthly will be a minimal time requirement.
 - c. Remind respondent that the reporting form will be returned each month to record the next month's data.
6. Exit -- leaving the establishment
 - a. Close the interview. Although rapport-building is an important aspect of interviewing, recognize that the respondent's time is valuable by limiting "small talk."
 - b. Remain open for further contact by saying that you may be in touch for data clarification and that the respondent is welcome to contact you with questions.
 - c. Express your thanks for the respondent's cooperation and time.
7. Review -- did you get what you came for?
 - a. Review report form as soon as possible after completing interview.
 - b. Add appropriate notes while the interview is still fresh in your mind; don't wait until the end of the day.

4.5.5 PERSONALITY TRAITS OF INTERVIEWERS

INTERVIEWERS, IN PERSON OR OVER THE TELEPHONE, MUST HAVE AN ADEQUATE UNDERSTANDING OF THE SURVEY TO BE EFFECTIVE. BUT, IN ADDITION, THEY MUST BRING TO THE INTERVIEW CERTAIN CHARACTERISTICS THAT WILL ENCOURAGE A SUCCESSFUL INTERACTION WITH THE RESPONDENT.

Personality Traits of the Successful Interviewer:

- Ability to find satisfaction in listening to others.
- Ability to hide one's feelings and take a passive role.
- Ability to make a positive first impression.
- Ability to accept being misunderstood and to let annoying statements pass.
- Ability to collect data that contradict the norm in order to modify, revise, or reject the norm.
- Ability to be neutral about issues and to avoid partisan identification.
- Ability to demonstrate a keen sense of timing, knowing how fast to move through questions without losing the respondent.
- Ability to have a controlled but creative imagination to adapt to the respondent's personality without compromising the objectives of the interview; that is, the ability to be flexible and to shift roles steadily.
- Ability to respond to feelings as well as to words in a nonaggressive manner.

4.6 DESIGNING THE SOLICITATION PACKAGE

- 4.6.1 DESIGNING THE SOLICITATION LETTER
- 4.6.2 DESIGNING A SOLICITATION PAMPHLET OR FLYER

4.6.1 DESIGNING THE SOLICITATION LETTER

THE SOLICITATION LETTER SHOULD BE A PERSONALIZED LETTER OF INTRODUCTION AND SHOULD ACCOMPANY THE BLS-790 FORM. IT SHOULD BE DIRECTED TO AN INDIVIDUAL ESTABLISHMENT OFFICIAL, SIGNED BY AN INDIVIDUAL STATE AGENCY OFFICIAL, AND WRITTEN IN A PERSONALIZED STYLE. MOST IMPORTANTLY, IT SHOULD ADDRESS THE CONCERNS OF THE POTENTIAL RESPONDENT. A VARIATION OF THIS LETTER MAKING SPECIFIC REFERENCE TO THE ORIGINAL REQUEST SHOULD BE USED FOR FOLLOW-UP OF NONRESPONDENTS.

A. PURPOSE OF THE SOLICITATION LETTER

The initial solicitation mailing to an employer should not consist of just the survey form itself. Without adequate explanation, the survey form by itself may confuse or alienate the potential respondent. A solicitation mailing which includes a personalized letter of introduction is much more likely to promote a favorable response. The letter can help reduce respondent confusion by giving some background information on the survey and its purpose, spelling out some justification for employer cooperation, and offering some basic instructions for completing and returning the survey form.

B. APPEARANCE AND FORMAT

1. In terms of appearance, keep in mind that the solicitation letter is the first item that the employer should see when opening the initial solicitation mailing.
2. The letter should be easy to read, easy to follow, and easy on the eyes. Below are some basic rules to follow:
 - . Use margins that are at least one inch wide or greater
 - . Indent paragraphs; use double or triple spacing between them
 - . Make use of underscoring, hyphens, quotation marks, etc., to highlight important information, words, or phrases, but use discretion
 - . If possible, do not use automated printing for producing letters for mass mailing unless the printer is capable of creating quality facsimiles of typewritten letters; if it is necessary to photocopy standard letters in large quantities, the same rule should apply.

3. The solicitation letter should be formatted in a personalized style. This might include the following:
 - a. Address the letter to an individual if possible. If a name of an official is unknown, send the letter to the attention of the Payroll Director. Be sure to match the address on the letter with the address on the envelope.
 - b. The letter should be signed personally by a State official or a quality facsimile of his/her handwritten signature should be used.
 - c. The letter should contain the name and telephone number of a staff member who can assist with questions.
 - d. As much as possible, the letter itself should also be written in a personalized style; it should read as though it is addressed to an individual. It should not sound like a detached informational narrative.
4. The letter may also be formatted to include any of the following:
 - a. A return portion that the newly solicited employer can mail back to request additional information;
 - b. A "mailback" portion that will allow the employer to be placed on a mailing list for State-published employment data, or will allow him/her to be sent a publications list;
 - c. A preprinted fact sheet about the CES program, that can be printed on the back of the letter.
 - d. Approved summary instructions for completing the report form, printed on the back of the letter.

C. CONTENT OF THE SOLICITATION LETTER

The content of the letter must be phrased to address the employer's concerns and avoid the question, "What has this got to do with me?" It is important to address and trigger the employer's concern and sense of responsibility to the welfare of his State, and his nation. However, it is just as important, to address the benefits that will be gained by the employer's business or industry. Try to phrase any benefits derived from the program in terms of benefits to his business. The following are some guidelines:

1. State the purpose of the survey.
2. Stress the importance of the survey.
3. Emphasize the importance of the respondent.
4. Stress the importance of the survey to the respondent, his fellow businessmen, the State, and the nation.
5. Tell the respondent why/how he was selected.
6. Emphasize the importance of his response; stress your need and your dependence on the employer.
7. Explain how his company can use the information.
8. Emphasize the confidentiality of the reported data.
9. Mention the possibility of follow-up for nonresponse.
10. Express your appreciation.

EXHIBIT 4-EInitial Solicitation Letter - Example
(State Agency Letterhead)

Dear (Mr., Ms. or Mrs. Establishment Official, or Employer):

Like many other employers, when you hear about the (State Agency Name), you may think about job placement, unemployment compensation, or the collection of quarterly unemployment reports and contributions. While we do perform these important tasks, we are also charged with the responsibility of collecting and compiling some very basic labor market statistics. We would like your help in the latter task by assisting us with the Current Employment Statistics (CES) Program.

Your participation in the CES program would include completing the enclosed survey form and returning it in the accompanying postage paid envelope. The employment and payroll information we request is usually already available from most employer payroll records:

- the number of employees on your payroll;
- the number of women on your payroll;
- the number of production (or nonsupervisory) workers;
- how much your production (or nonsupervisory) workers were paid for the payroll period; and
- the number of hours they were paid for.

Your response to this survey is completely confidential; information from your business will be combined with data from other firms and published in a way that will prevent your establishment from being identified.

The information you provide is used for the following:

- as the basis for projecting future industry and occupational trends in (State's Name) and the nation;
- as a negotiating tool in labor market negotiations locally and nationwide;
- as an indicator of potential market demand and the occurrence of business cycles; and
- to provide information on the economic health of the State.

We know how valuable your time is -- it is not our intention to waste it. We do, however, strive to produce the best labor market information possible. We will, therefore, be making follow-up contacts by phone, personal visit, or mail to those establishments from which we have not received a response. Thank you for your assistance in helping us to provide key monthly indicators about our economy. If you have any questions, please call (person/phone number). (Note: Specify if the telephone number is a toll free or collect number).

Sincerely yours,

(Signature of State Agency Official)

(Name and Title of State Agency Official)

D. THE FOLLOW-UP LETTER

Generally the same rules apply to the follow-up letter that apply to the initial solicitation letter. However, the follow-up letter is a reminder. It should refer back to the original solicitation letter and summarize the major points of that letter. An example of a follow-up letter is shown below:

EXHIBIT 4-F

Solicitation Follow-up Letter - Example

(State Agency Letterhead)

Dear (Mr., Ms. or Mrs. Establishment Official, or Employer):

Recently we wrote to you asking for your participation in the Current Employment Statistics (CES) program. We have not yet received the survey which we enclosed. In case it didn't reach you or has been misplaced, we have enclosed another survey form. Please fill it out by reporting information for the most recent pay period and return it during the next week in the enclosed postage-paid envelope.

Each establishment we have contacted, whether a large firm or a small one, is vitally important in developing a representative sampling of labor market information for your industry, the local and State economy, and even the national economy. Your participation will help us form a more accurate sampling of the labor market nationwide.

The information we are asking you to provide -- total employment in your establishment, the number of production and non-supervisory workers, weekly hours and earnings -- are leading indicators of the status of both the local and national economy. This information is also extremely useful to our State legislators and planners, government officials, and private businesses, such as your own firm.

We guarantee that your responses will be held in the strictest confidence and used for statistical purposes only. Statistics are published in such a way that participating firms and the data they provide cannot be identified.

Please take a few minutes of your time to fill out and return the survey form. If we can answer any questions you may have, including publications we can make available to you based on this survey and how you may use this information, please call us (or State Agency Contact person) at (State Agency Phone Number). Thank you for your participation.

Sincerely yours,

(Signature of State Agency Official)

(Name and Title of State Agency Official)

4.6.2 DESIGNING A SOLICITATION PAMPHLET OR FLYER

A PAMPHLET OR FLYER IS A GOOD DEVICE FOR CATCHING THE POTENTIAL RESPONDENT'S ATTENTION AND ANSWERING SOME BASIC QUESTIONS. IT SHOULD BE FORMATTED FOR STYLE AND CONTENT IN A WAY THAT IS EYE CATCHING, INFORMATIVE, AND WILL PROVOKE ENOUGH INTEREST TO RESULT IN A FAVORABLE RESPONSE FROM THE RESPONDENT.

A. THE RATIONALE FOR A SOLICITATION PAMPHLET

Some states have reported positive solicitation response as a result of using an informational pamphlet or flyer. The flyer is sent out with the solicitation package, or mailed separately in response to phone inquiries or correspondence from the solicited employer. An informational pamphlet can function as both a good public relations tool, and as a ready source of information that can answer questions, dispel doubts or bad feelings, and induce a positive response.

B. APPEARANCE

The pamphlet should be eye-catching. In particular, the cover of the pamphlet should be designed to catch the reader's attention. Creative graphics or art may entice the reader to read the pamphlet, and leave the reader with a positive feeling about participating in the CES program.

C. FORMAT

There is no need to bombard the solicited employer with too much material. Mail a pamphlet or flyer of one or two legal size pages (single or double sided) enclosed in a legal size envelope. This provides an adequate and creative method for addressing employer concerns and questions.

D. CONTENT

If a State decides to design its own solicitation pamphlet, State staff should try to address typical questions and concerns of the newly solicited employer. Answer questions that have been prevalent in your experience and were important in determining the employers response to the survey. Below are potential questions an employer might ask:

- * What is the CES survey?
- * Why or how have I been selected to participate?
- * How do I return the requested information?
- * How is the data that I provide used?
- * How can I use the information produced by the program?
- * Will my response be kept confidential?
- * Is my response mandatory?
- * Why do you need information from my firm?
- * Where can I find instructions for responding?
- * Under what law, or authority, is this information being collected?

A copy of a flyer that is available from the BLS for State use is shown on the following two pages.

EXHIBIT 4-G
CES Sample Solicitation Flyer

WHY HAVE I BEEN SELECTED TO PARTICIPATE IN THE CES SURVEY?

Your Business is an Important Part of the Commerce in this State.

Whether your business is large or small, whether the number of your employees, and their hours or earnings, change often or not, your business represents an important part of this State's economy. By participating, you join with employers throughout the nation who are providing information on the economic well-being of the States and the nation.

HOW IS MY RESPONSE USED?

We Combine Your Response with Data from Other Establishments to Develop Estimates for Employment, Hours, and Earnings at Local, State, and National Levels.

Business, labor, and government use this information to analyze business and economic conditions, to project future industry and occupational trends, to assist in labor/management negotiations, to locate new plants and industrial areas, to aid in marketing studies, to forecast business cycles, to draw new business to the State, and to determine the demand for labor in your industry.

WILL MY RESPONSE BE KEPT CONFIDENTIAL?

Absolutely.

We will not release data in any way or form that will allow you or your business to be identified.

HOW DO I COMPLETE THE SURVEY?

Just Fill Out the Requested Information and Drop it in the Mail.

Enter the requested information for the pay period containing the 12th of the month. This includes the number of paid employees (total and women-only), and the number of nonunion, victory or production workers, along with their payroll and hours for the pay period. Most employers find that this information is readily available in their payroll records. It should take just a few minutes each month to fill out the CES survey form. Then mail it in the enclosed postpaid envelope. We will return the same "shuttle" form to you the next month.

HOW CAN I GET MORE INFORMATION?

We can tell you more about our agency and what publications we can make available to you and we will be happy to answer your questions about the CES survey program. Please feel free to contact us at:

**The
Current
Employment
Statistics
Survey**



U.S. Department of Labor
Bureau of Labor Statistics

CES

**A KEY MONTHLY
INDICATOR OF
CHANGES IN
THE ECONOMY**

Measures (seasonally adjusted) Payroll Employment
by Industry
(Seasonally Adjusted)

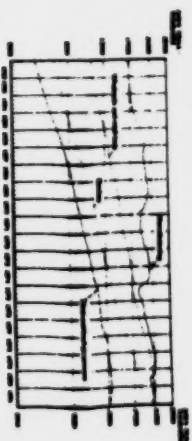


EXHIBIT 4-G. Page 2

WHAT IS THE CURRENT EMPLOYMENT STATISTICS (CES) SURVEY?

The CES Survey is the Leading Monthly Barometer of the Employment Change in the Economy.

The survey has been in continuous existence since 1915. It is jointly managed by this State and the Bureau of Labor Statistics of the U.S. Department of Labor. Its purpose is to report monthly employment, hours, and earnings information for the nation, the State, and major labor areas within the State. Approved by the U.S. Office of Management and Budget, the CES survey is also supported by the Business Research Advisory Council, whose members are nominated by the U.S. Chamber of Commerce and the National Association of Manufacturers.

EMPLOYMENT

Employment by State

STATE	JUNE 81	JUNE 82	JUNE 83	JUNE 84	JUNE 85
ALABAMA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
ALASKA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
ARIZONA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
ARKANSAS	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
CALIFORNIA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
COLORADO	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
CONNECTICUT	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
DELAWARE	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
FLORIDA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
GEORGIA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
HAWAII	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
ILLINOIS	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
INDIANA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
IOWA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
KANSAS	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
KENTUCKY	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
LOUISIANA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MAINE	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MARYLAND	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MASSACHUSETTS	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MICHIGAN	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MINNESOTA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MISSISSIPPI	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MISSOURI	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
MONTANA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NEBRASKA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NEVADA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NEW HAMPSHIRE	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NEW JERSEY	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NEW MEXICO	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NEW YORK	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NORTH CAROLINA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
NORTH DAKOTA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
OHIO	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
OKLAHOMA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
OREGON	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
PENNSYLVANIA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
RHODE ISLAND	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
SOUTH CAROLINA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
SOUTH DAKOTA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
TENNESSEE	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
TEXAS	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
UTAH	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
VERMONT	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
VIRGINIA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
WASHINGTON	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
WEST VIRGINIA	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
WISCONSIN	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0
WYOMING	1,321.1	1,319.0	1,319.0	1,319.0	1,319.0

HOURS

Average Weekly Hours in
Manufacturing Industries
(Seasonally Adjusted)



Average Hourly Earnings by State
for Manufacturing

STATE	JUNE 81	JUNE 82	JUNE 83	JUNE 84	JUNE 85
ALABAMA	9.15	9.15	9.15	9.15	9.15
ALASKA	9.15	9.15	9.15	9.15	9.15
ARIZONA	9.15	9.15	9.15	9.15	9.15
ARKANSAS	9.15	9.15	9.15	9.15	9.15
CALIFORNIA	9.15	9.15	9.15	9.15	9.15
COLORADO	9.15	9.15	9.15	9.15	9.15
CONNECTICUT	9.15	9.15	9.15	9.15	9.15
DELAWARE	9.15	9.15	9.15	9.15	9.15
FLORIDA	9.15	9.15	9.15	9.15	9.15
GEORGIA	9.15	9.15	9.15	9.15	9.15
HAWAII	9.15	9.15	9.15	9.15	9.15
ILLINOIS	9.15	9.15	9.15	9.15	9.15
INDIANA	9.15	9.15	9.15	9.15	9.15
IOWA	9.15	9.15	9.15	9.15	9.15
KANSAS	9.15	9.15	9.15	9.15	9.15
KENTUCKY	9.15	9.15	9.15	9.15	9.15
LOUISIANA	9.15	9.15	9.15	9.15	9.15
MAINE	9.15	9.15	9.15	9.15	9.15
MARYLAND	9.15	9.15	9.15	9.15	9.15
MASSACHUSETTS	9.15	9.15	9.15	9.15	9.15
MICHIGAN	9.15	9.15	9.15	9.15	9.15
MINNESOTA	9.15	9.15	9.15	9.15	9.15
MISSISSIPPI	9.15	9.15	9.15	9.15	9.15
MISSOURI	9.15	9.15	9.15	9.15	9.15
MONTANA	9.15	9.15	9.15	9.15	9.15
NEBRASKA	9.15	9.15	9.15	9.15	9.15
NEVADA	9.15	9.15	9.15	9.15	9.15
NEW HAMPSHIRE	9.15	9.15	9.15	9.15	9.15
NEW JERSEY	9.15	9.15	9.15	9.15	9.15
NEW MEXICO	9.15	9.15	9.15	9.15	9.15
NEW YORK	9.15	9.15	9.15	9.15	9.15
NORTH CAROLINA	9.15	9.15	9.15	9.15	9.15
NORTH DAKOTA	9.15	9.15	9.15	9.15	9.15
OHIO	9.15	9.15	9.15	9.15	9.15
OKLAHOMA	9.15	9.15	9.15	9.15	9.15
OREGON	9.15	9.15	9.15	9.15	9.15
PENNSYLVANIA	9.15	9.15	9.15	9.15	9.15
RHODE ISLAND	9.15	9.15	9.15	9.15	9.15
SOUTH CAROLINA	9.15	9.15	9.15	9.15	9.15
SOUTH DAKOTA	9.15	9.15	9.15	9.15	9.15
TENNESSEE	9.15	9.15	9.15	9.15	9.15
TEXAS	9.15	9.15	9.15	9.15	9.15
UTAH	9.15	9.15	9.15	9.15	9.15
VERMONT	9.15	9.15	9.15	9.15	9.15
VIRGINIA	9.15	9.15	9.15	9.15	9.15
WASHINGTON	9.15	9.15	9.15	9.15	9.15
WEST VIRGINIA	9.15	9.15	9.15	9.15	9.15
WISCONSIN	9.15	9.15	9.15	9.15	9.15
WYOMING	9.15	9.15	9.15	9.15	9.15

THE CURRENT EMPLOYMENT STATISTICS SURVEY...

Produces monthly estimates of a wide variety of employment and earnings information for the nation and for your State and local area.

Numbers of nonfarm employees

—by industry
—by State and local area

Gross hours and earnings of production and nonsupervisory workers, by industry.

Average hourly earnings of production workers in manufacturing.

Historical tables showing employment and hours and earnings trends over the years.

Seasonally adjusted estimates for some types of information.

BUSINESSES CAN USE CURRENT EMPLOYMENT STATISTICS...

To guide decisions on plant locations, sales, and purchases.

To construct escalation clauses for long-term supply or construction contracts that depend on the movement of average hourly earnings for a selected industry.

To negotiate labor contracts based upon industry, or area, hourly earnings and weekly hours series.

To detect and plan for swings in the business cycle, using average weekly hours series.

To draw comparisons between your business and the industry or economy as a whole.

EARNINGS

4.7 PROCESSING SOLICITATION RESPONSES

- 4.7.1 RECEIPT, EDIT, AND REVIEW OF DATA RESPONSES
- 4.7.2 FOLLOW-UP OF NONRESPONDENTS
- 4.7.3 ADDING NEW REPORTERS TO THE REGISTRY

4.7.1 RECEIPT, EDIT, AND REVIEW OF DATA RESPONSES

WHEN RESPONSES TO SOLICITATION ARE RECEIVED, AN ORGANIZED SYSTEM IS NEEDED TO RECORD THE RESPONSES AND TO REVIEW THE QUALITY OF DATA FOR THE APPROPRIATE FOLLOW-UP. REVIEW DATA IN ACCORDANCE WITH THE EDIT CRITERIA IN SECTION 6.3.

A. RECEIPT & CHECK-IN OF RESPONSES

When responses are received, the following procedures should be used to record the responses:

- . Post Office returns -- If the address is incorrect, do further address refinement and remail the solicitation package.
- . Correspondence -- Answer any correspondence and stress the importance of the survey.
- . Data responses -- Edit and review data responses (See B below) and record the data.

Record the receipt and response status of each response for solicitation control purposes.

B. EDITING & REVIEWING DATA RESPONSES

Perform pre-edit review of schedules and process the schedules through normal editing steps.

If the new reporter seems to have misunderstood the reporting instructions, enclose a note of explanation when returning the schedule to collect the next month's data. If appropriate, contact the respondent by telephone and review any questionable entries on the report form.

EXHIBIT 4-H

STEPS IN CHECKING IN SCHEDULES

- * LOG IN THE RECEIPT DATE ON THE CONTROL FILE
- * REVIEW THE REPORTED DATA FOR --
 - Valid Numeric Entries
 - Complete Reporting
 - Reasonableness of Reported Data
- * CONTACT RESPONDENT IF NECESSARY TO CONFIRM OR
COMPLETE THE REPORT
- * RECORD THE PROPER SOLICITATION RESPONSE INFORMATION

4.7.2 FOLLOW-UP OF NONRESPONDENTS

THE PURPOSE OF FOLLOW-UP IS TO MAXIMIZE THE RETURNS FROM THE SOLICITATION EFFORT. RESPONSE RATES CAN BE SHARPLY INCREASED VIA NONRESPONSE FOLLOW-UP. TO MEASURE THE RELATIVE COST-EFFECTIVENESS OF THE DIFFERENT FOLLOW-UP METHODS, IT IS NECESSARY TO KEEP RECORDS OF FOLLOW-UP ACTIVITY.

A. WHY IS FOLLOW-UP NECESSARY _

Follow-up is necessary for a number of reasons:

- . Follow-up verifies that the selected unit has received the survey package
- . Follow-up stresses the importance of participation
- . Follow-up can be used to answer specific questions about the CES program

Solicitation methods tests conducted in various States found that, after initial solicitation, response rates can be sharply increased through nonresponse follow-up. Many employers will put aside an initial solicitation request and will not react unless approached a second or third time. Procedures should be established to conduct follow-up spaced no more than one month apart.

B. FOLLOW-UP METHODS

Various follow-up methods have been effective in different States, illustrating the value of alternative employer contact techniques. Some examples are:

- . Mail
- . Telephone Contact
- . CATI (Computer Assisted Telephone Interviewing)
- . Personal visits

When selecting a follow-up method, the choice or mix of methods will depend on a number of factors, such as resources available and type of establishment solicited.

1. Mail -- The follow-up mailout package should include an employer letter specifically prepared for follow-up purposes (as well as a BLS-790 form and a brochure, if available).
2. Telephone -- A staff member calls the establishment to ascertain if the survey package has been received, and if there are problems with the instructions. Staff must be knowledgeable in the collection procedures and in the uses of the data collected. The telephone can also be used initially to prenotify a respondent, and to establish a contact person for addressing the solicitation package.

-
3. CATI -- This method of follow-up combines the use of a telephone with an interactive computer system that guides the interviewer through the interview and data collection process. Responses are coded immediately on the control file. The reporter data can also be captured using CATI. This procedure can provide immediate information on solicitation. Such a CATI system can be designed to automatically call up reports to be contacted, based on agreed-upon call-back dates on any other appropriate criteria.
 4. Personal Visit -- A staff member who visits an establishment should be prepared to help the respondent make the proper entries on the report form, as well as to answer questions about the survey procedures and the data collected.

C. FOLLOW-UP PLAN

Tightly controlled methods of follow-up, following an established plan, should be used to ensure that an adequate follow-up is made of each firm solicited. At four week intervals from the initial contact, follow-up twice to determine the following:

- a. Did the establishment respond?
- b. If it did not, will it?
- c. If it will not, why not?

D. KEEPING RECORDS OF FOLLOW-UP ACTIVITY

During all follow-up steps, record each activity as it is done -- record the type of follow-up and the follow-up date, as well as the information on eventual response. For evaluation of costs per usable response, keep a record of staff time and other costs of follow-up activity.

E. TESTING THE EFFECTIVENESS OF FOLLOW-UP METHODS

The effectiveness of alternative follow-up methods can be tested by using two or more techniques at the same time.

Distribute the follow-up sample among the methods to be tested by some random means, such as end digit of the schedule number. Record the particular follow-up technique used for each employer on the Control File. Also record each response. Response rates can then be measured for each follow-up method that is tested.

4.7.3 ADDING NEW REPORTERS TO THE REGISTRY

FOR EACH ESTABLISHMENT, THE SOLICITATION PROCESS MUST BE DECLARED TO BE COMPLETE AT AN APPROPRIATE TIME. AT THIS TIME, A DECISION WILL BE MADE EITHER TO ADD THE SAMPLED ESTABLISHMENT TO THE REGISTRY, OR NOT TO DO SO. THE SOLICITATION CONTROL FILE MUST ALSO BE UPDATED TO REFLECT THE FINAL SOLICITATION STATUS OF THE ESTABLISHMENT.

An establishment is added to the registry of active reporters after two usable data responses have been received.

On a regular basis, copy the relevant information for new respondents from the Solicitation Control File onto the registry, and assign report numbers to the new reporters. All other necessary information for the registry records should be available from the Solicitation Control File.

Show on the Solicitation Control File that the information for a new reporter has been moved to the registry. Record the date of the transaction.

Maintain details of all solicited reporters on a historical file for at least three years; include all coded response information. Use the information as a reference in future solicitations.

Transmit registry adds for inclusion on the CES National Registry according to the procedures described in Section 5.

The solicitation process is completed when one of the following conditions is met for each solicited establishment:

- 1) usable data including one or more items requested on the BLS 790 form is reported for a minimum of two consecutive months;
- 2) direct (overt) refusal is made; or
- 3) no data are received -- without a direct refusal -- after a minimum of two follow-up attempts to collect data.

4.8 ANALYTICAL USES OF THE CONTROL FILE

- 4.8.1 MEASURING SOLICITATION RESPONSE
- 4.8.2 MEASURING SOLICITATION COST
- 4.8.3 EVALUATING AND COMPARING SOLICITATION RESULTS

4.8.1 MEASURING SOLICITATION RESPONSE

RESPONSE RATES THAT ARE CALCULATED UNIFORMLY PROVIDE INFORMATION FOR EVALUATING THE EFFECTIVENESS OF SOLICITATION METHODS.

Response rates are used to measure the effectiveness of a solicitation effort. However, the response rate can only be calculated if the solicitation is properly controlled. Be sure to assign an appropriate response code to all sample units as each report form is received for processing.

CALCULATING THE USABLE RESPONSE RATE: Calculate the USABLE RESPONSE RATE by dividing the number of "usable responses" by the total number of attempted solicitations, including refusals, nonresponses, mail returns, reporters already active who were resolicited, out-of-scope and out-of-business establishments, unusable responses, and those establishments which reported only once or twice, then stopped reporting.

$$\frac{\text{NUMBER USABLE RESPONSES}}{\text{TOTAL SOLICITED}} = \text{USABLE RESPONSE RATE}$$

CALCULATING AN ADJUSTED RESPONSE RATE: To calculate an ADJUSTED RESPONSE RATE, reduce the number of total attempted solicitations by those sample units coded "out-of-scope," "out-of-business," "Post Office return," and "duplicates." Then calculate the adjusted response rate by dividing the number of usable responses by this adjusted (attempted) solicitation total.

$$\frac{\text{NUMBER USABLE RESPONSES}}{(\text{Total Solicited} - \text{OOS-OOB-POR-DUP})} = \text{ADJUSTED USABLE RESPONSE RATE}$$

EXHIBIT 4-I

STEPS IN CALCULATING
RESPONSE RATES

- * CONVERT ALL PENDING AND OTHER UNRESOLVED RESPONSES
TO FINAL RESPONSE CODES
- * CALCULATE USABLE RESPONSE RATES
- * CALCULATE ADJUSTED RESPONSE RATES
- * SEE THE NEXT PAGE -- HOW TO MEASURE THE COSTS OF
THE SOLICITATION EFFORT

4.8.2 MEASURING SOLICITATION COST

A PRIMARY ANALYTICAL USE OF THE INFORMATION ON THE SOLICITATION CONTROL FILE IS TO MEASURE THE COST PER USABLE RESPONSE FOR THE SOLICITATION. A STANDARDIZED MEASUREMENT IS MADE POSSIBLE ONLY BY THE COMPLETENESS OF COST INFORMATION AND BY USE OF STANDARDIZED CODING ON THE SOLICITATION CONTROL FILE.

RECORDING SOLICITATION COSTS (see the example of a suggested Cost Summary Worksheet): A structured means of recording the costs associated with the solicitation activity is needed to take full advantage of the information captured on the Solicitation Control File. The worksheet shown on the next page can display summary costs by activity or a State may want to specifically assign a separate accounting code for CES solicitation. Be sure to record all costs associated with these activities to ensure an accurate measurement of costs per usable response.

CALCULATING COST PER USABLE RESPONSE: A calculation of cost per usable response can only be performed once the solicitation process for a given sample panel is determined to be at an end and a final status is assigned to each member of the solicitation panel. (All "pending" responses and "one-month" and "two-month" responses must be resolved into one of the other response classifications.)

1. Calculate all costs associated with the solicitation activity for the sample establishments.
2. Determine the number of "usable responses" -- those which have provided at least 2 months of usable data and have been entered onto the registry as active reporters.
3. Calculate the COST PER USABLE RESPONSE by dividing the total costs by the number of usable responses:

TOTAL SOLICITATION COSTS = COST PER USABLE RESPONSE
NUMBER USABLE RESPONSES

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 4.8.2
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EXHIBIT 4-J

date prepared <u> </u> / <u> </u> / <u> </u>		SOLICITATION ACTIVITY COST SHEET								state <u> </u>	year <u> </u>
ACTIVITY	STAFF	PRINTING	COMPUTER	POSTAGE	PHONE	TRAVEL	OTHER	TOTAL			
Address Refinement											
Forms/ Envelopes											
Initial Contact											
1st Follow-up											
2nd Follow-up											
TOTALS											

Total Establishment Solicited: Usable Response Rate: %Total Usable Responses: Cost Per Usable Response: \$

4.8.3 EVALUATING AND COMPARING SOLICITATION RESULTS

IN ADDITION TO PRODUCING RESPONSE RATE AND COST-EFFECTIVENESS INFORMATION, THE SOLICITATION CONTROL FILE IS USEFUL AS A MANAGEMENT TOOL. IT STORES INFORMATION RELATING TO EACH STEP OF THE SOLICITATION PROCESS, RETAINS THAT INFORMATION OVER A USEFUL PERIOD OF TIME (AT LEAST 3 YEARS), AND CAN BE USED TO GENERATE REPORTS BOTH FOR CONTROLLING THE SOLICITATION PROCESS AND FOR ANALYZING THE RESULTS OF THE SOLICITATION.

Analytical uses of the information on the Solicitation Control File include:

- A. Comparing response rates by industry, or by establishment size. Those industries or size groups which have lower response rates can be given more extensive follow-up efforts in future solicitations.
- B. Comparing different employer contact or other solicitation techniques. The most effective contact techniques and follow-up durations should be identified for use in future solicitations.
- C. Evaluating the quality of address refinement activity by measuring the number of responses in the out-of-business, out-of-scope, Post Office return, and duplicate reporter categories.
- D. Determining the length of time it takes to complete a solicitation process for a new respondent: How long does it take to get a data response or a refusal? How many responses come from the initial solicitation, as opposed to the first or second follow-up?
- E. Determining any sample shortfall in the National CES Sample requirements. Exhibit 4-H is a worksheet designed to help evaluate sample shortfall for the National G-1 sample requirements. Each piece of information in the worksheet can be obtained from the solicitation file. See Exhibit 4-H.

The information compiled will:

- . indicate the general level of success in soliciting new respondents for the national CES program;
- . provide feedback on the usefulness of documented solicitation procedures;
- . allow research into the relative effectiveness of various solicitation techniques in differing situations.

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 4.8.3
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EXHIBIT 4-K

EVALUATING RESPONSE BY INDUSTRY AND SIZE CLASSIFICATIONS

CELL-ID	1 Universe 2 Available 3 to Solicit	4 Units by National Sample (App. G-1)	5 Units on State Registry	6 Units Required to Solicit (=b-c)	7 Increase for Non- Response	8 Units Solicited (=d+e)	9 OOS, etc.	10 Nonresponse and Unusable Reports	11 Units Unable Processed	12 Response Rate (= $\frac{1}{f-g}$)	13 Shortfall (if any) (=d-1)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
XXXXXX	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
TOTAL											
XXXXXX	1										
(ETC.)	2										

* This blowup factor should be based on a State's previous experience with response rates. The factor will probably vary by industry and size. In lieu of previous experience, increase sample solicited by 25% of requirement.

5: THE CES NATIONAL REGISTRY -- IDENTIFYING AND CODING SAMPLE REPORTERS

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**Section 5: THE CES NATIONAL REGISTRY -- IDENTIFYING AND CODING
SAMPLE REPORTERS****5.1 THE CES NATIONAL REGISTRY -- WHAT IT IS AND HOW IT IS MAINTAINED****A. What is the National Registry**

The National Registry file contains identifying information on each establishment in the sample, including State and Report number, SIC code, company name, address, and other pertinent identification information. The microdata report identification (State/report number and SIC code) on the BLS 790 schedule must match the identification information on the National Registry for the microdata to be used to produce estimates. In this way, the Registry is the control mechanism for accepting the monthly reporter data for the CES Survey.

B. Flow of Processing to Maintain Current Registry Information

The CES program is a large program in terms of

- . the various administrative organizations involved
- . the number of respondents
- . the volume of estimates published

The magnitude of the program requires strict adherence to uniform sample coding and control procedures. These procedures include

- . assignment of identification codes
- . changes in existing codes or other reporter identification
- . cancellation of reports from active files

Since establishment identifying information is kept on the Registry, this is the file that must be updated to reflect any of the above changes.

State agencies, Regional Offices, and BLS-Washington are involved in different aspects of coding and control procedures with regard to the Registry.

1. State Activities

Each State is responsible for the review and maintenance of the information on the National Registry file pertaining to its reporting panel. For each reporter in the CES sample in the State, the State agency is responsible for the assignment of

- . State FIPS Code/Report Number
- . SIC Code
- . Other identifying information (Report location, mailing address, etc.)

2. Regional Office Activities

Updates to the National Registry are reviewed in the BLS Regional Office for final approval. The Regional Office notifies the State agency of actions taken on cases submitted for review. The Regional Office also notifies BLS-Washington of approved actions. The Regional Office transmits the transactions to BLS-Washington for processing. The Regional Office may authorize a State to telecommunicate updates directly to BLS-Washington.

3. BLS-Washington Activities

BLS-Washington incorporates approved codes into the National Registry file and provides a transaction listing to the Regional Offices, showing all successful updates and all errors which prevented updates from being processed.

Twice a year, BLS-Washington prepares copies of the current National Registry and distributes them to the States and Regional Offices. BLS-Washington also maintains an on-line copy of the Registry file which the Regional Offices can access by computer terminal to determine the current status of individual reporters.

BLS-Washington also maintains Registry records and collects monthly data for a group of National Reporters.

C. Confidentiality of Reporter Information

Under existing contractual arrangements, the cooperating State agency has agreed that:

- . individual establishment and firm data will be held confidential
- . the data will not be published in such a way as to disclose individual establishment information without written permission from the reporter
- . any data collected on the cooperative schedules will be used only for statistical purposes.

Since the status of the BLS cooperating representation extends to State employees under the same direction actively engaged in the cooperative programs, the free exchange of information necessary to the operating of Federal/State cooperative programs is permissible, even if the programs are in different State agencies. Certain information from all Federal/State programs may be exchanged for statistical purposes (sample expansion, identification, comparison, coding, reconciliation of codes with other statistical programs of the agencies, and other purely statistical uses), specifically:

- . the names of respondents
- . identification of reporting units
- . size of establishments
- . nature of business activity information.

The data secured through the cooperative programs are not to be used for nonstatistical purposes (law enforcement, regulation, industrial directories, etc.). Refer to Section 12 for more on the confidentiality of data.

5.2 CONTENTS OF THE CES NATIONAL REGISTRY RECORDS

The Registry contains the following data items.

<u>Data Item</u>	<u>Record Position</u>	<u>Field Length</u>
State FIPS code	1-2	2
Report number	3-7	5
1972 SIC	5-11	4
Region code for SIC 3731	12-13	2
FIPS County code	14-16	3
Optional Area code (if used)	17-19	3
Key Reporter code	20	1
Auxiliary code	21	1
Blank	22	1
Ownership code	23	1
Program Status code	24	1
Employment Size code	25	1
U.I. Account Number	26-36	11
Establishment name	37-63	27
Report Location	64-72	9
1972 SIC	73-76	4
Region code for SIC 3731	77-78	2
"11" action and card code	79-80	2

A. Report Identification Codes

Each respondent has a unique identifying control code consisting of

- . State code
- . report number
- . industry code (SIC)

The matched-sample technique requires that there be no duplication of report code.

1. FIPS State Numeric Code

- . 2-digit numeric code
- . identifies the particular State in which the reporting unit is located
- . a list of FIPS (Federal Information Processing Standards) State codes is shown in Appendix E.1.

2. Report Number

- . 5-digit serial number
- . along with the FIPS State code, identifies the reporting unit
- . assigned to each new reporter by the State agency.

3. Industry Code

The industry codes assigned in the ES-202 program are used in the CES Program as explained in Section 2.

B. Other Establishment Identification Codes**1. FIPS County Code**

- . 3-digit numeric code
- . identifies the county in which the sample unit is located
- . codes are listed in the U.S. Department of Commerce publication "Counties and County Equivalents of the States of the United States."

The following additional codes must be used to identify the locations of reporting units which cannot be assigned a valid FIPS code.

Code	Description
------	-------------

- | | |
|-----|--|
| 997 | Locations in more than one county, but not Statewide |
| 999 | Unknown or undefined locations, and Statewide operations |

2. Key Reporter Code

Certain CES sample units are designated as Key reporters for the National Program

- . because of their large size in relation to other reporters in the industry, and
- . because over time these reporters accurately reflect the movement in the industry.
- . See appendix D.5 for the list of Key reporters.
- . BLS-Washington updates this list of national Key reporters annually to reflect changes in the sample composition.
- . National criteria require that Key reporters be establishments with at least 10,000 employees or that the reporter comprise at least 10% of the sample for an estimating cell.
- . States should collect and process data from Key reporters in time for the national 1st closing.
- . The code "1", indicating a national Key reporter, is assigned by BLS-Washington only.
- . A code "9" is assigned to "National" reporters -- those reporters for which data are collected directly by BLS-Washington and are distributed by BLS-Washington to the States. (See appendix D.1 for the list of National reporters.)

3. Auxiliary Status Code

- . This information identifies support activities performed by an establishment for other parts of the same company.
- . This code is used for reference purposes in the review of microdata.
- . The information is collected on the BLS-3023 Form, and should be available on the ES-202 files.
- . The codes used are:
 - 0 - Not Reported
 - 1 - Central Administrative Office
 - 2 - Research, Development
 - 3 - Storage (Warehouse)
 - 4 - Other
 - 5 - Not Auxiliary Unit

4. Ownership Code

- . This information is used to differentiate between the several levels of government and the private sector of the economy.
- . The information is available from the ES-202 UI files as a 2-position code (the second position is "0").
- . The first digit of the ownership code is used for the CES reporters. These codes are:
 - 1 - Federal Government
 - 2 - State Government
 - 3 - Local Government
 - 4 - International Government
 - 5 - Private
 - 6 - Private, Corporation (optional)
 - 7 - Private, Non-Corporation (optional)

5. Program Status Code

These codes indicate the program participation of the sample units in the CES program. These codes are:

- 1 - CES reporter
- 0 - Cancelled reporter

A cancelled reporter is retained on the Registry for several months. Periodically, the Registry is purged of cancelled reporters.

6. Employment Size Code

- . The employment size code assigned to new reporters by the State should be based on the "All Employees" figure for March, if possible. If March employment is not available, use the employment size for the month nearest March.
- . The employment size code will automatically be updated for benchmark purposes by the National processing system based on the reported employment each March.
- . States cannot directly change the employment size code on the National Registry. Changes to the employment size code by the States should be requested by memorandum, stating the reason for the change.
- . The ten size codes used in the ES-202 files are reduced to nine in the CES Program. Size 0 (no employees) is merged with size 1 (1-4 employees).

Employment Range	Employment Size Code
0-4	1
5-9	2
10-19	3
20-49	4
50-99	5
100-249	6
250-499	7
500-999	8
1000 and over	9

7. UI Account Number

- . This is an employer identification number used to report to the State Unemployment Insurance Agency.
- . The information is available from the State UI files.
- . This number is used as a reference for identifying the reporting units of a company in a State.

CONFIDENTIAL8. Primary Company Name (Establishment Name)

The name of the reporter is the trade name under which the business is operated, not the name of the owner. The plant designation is the firm's own identification of the reporting unit involved.

In most instances, the complete name of the establishment and plant designation can be spelled out; abbreviations, therefore are not generally required. If necessary, any meaningful abbreviation is acceptable.

Illustration 5-1

NAME CONVENTIONS

<u>Rule</u>	<u>Actual Name of the Establishment</u>	<u>BLS Title for the Establishment (Omit all punctuation)</u>
1. List the last name and trade name of the reporter first	John Smith Company Bank of Huntington	Smith John Company Huntington Bank of
2. List the word "the" last when used in the reporter's name	The John Smith Company	Smith John Company The
3. List a report by its operating name rather than by ownership	Kelly and Green, D/B/A The White Tower Restaurant	White Tower Restaurant The
4. A division name follows the name of the parent company	Wheel & Axle Division U.S. Steel	U S Steel Wheel & Axle Div
5. The name of a subsidiary precedes name of the parent company	Johnes Inc., John Smith, Subsidiary	Smith John sub of Johnes Inc

Instead of following the above alphabetizing rules, States may use the actual name of the establishment and enter an asterisk "*" to denote the beginning letter of the establishment name to be used for alphabetizing purposes. This procedure will allow the State to machine address the schedules by the actual establishment name as well as allow for mechanical sorting by establishment name.

Actual Name of Establishment

The Hecht Co.
U.S. Steel
John Smith Co.

Use of an Asterisk "*"

The *Hecht Co
U S Steel (no asterisk necessary)
John *Smith Co

9. Location of Establishment

- . This is the actual location of the establishment (name of city or other minor civil division)
- . The location is not necessarily the mailing address
- . For a multi-unit report covering more than one location, enter the number of locations represented by the report, followed by the State abbreviation (for example, 28 PA or 102 CA).

10. Action Code

- . This code is used for editing purposes to mechanically differentiate the transactions to the Registry File. The codes are:
 - 0 - code used to cancel a reporter
 - 1 - code used to create a new reporter
 - 2 - code used to change coded information on an existing reporter
 - 9 - special action code used to bypass edit checks (for use by BLS-Washington only)

11. Card Code

- . A computer processing code.
- . Only the information in card "1" is required from the States.
- . Card codes "2" and "3" relate to mailing address information for the establishment and are not maintained by BLS except for National Reporters.

5.2.1 Assigning New CES Reporters to the Registry

A. Definition of a New Report

A new report is considered to be

- . a reporter which reports data on a BLS 790 schedule for the first time, or
- . a reporter which has previously reported in the sample, but which for sufficient reason had been cancelled. (After a report number is cancelled, it is not reinstated.)

Newly solicited respondents should submit data at least two times before they are added to the sample, for purposes of

- . ironing out reporting difficulties
- . indicating that the establishment will continue reporting
- . estimation using the link-relative method
- . reinstating reports, as well as for first time reports, since the major reason for the previous cancellation is delinquency over a long period of time

For reinstated reports, the previous industry code may be completely inappropriate for the current activities of the establishment; consult the ES-202 to obtain the most current industry information.

- . The composition of the reporting unit may have changed because of increased employment, a merger, etc., so that it is no longer comparable to the previous reporting unit.

Procedures for submitting new reports to the Registry file are described in Exhibit 5-B.1. Exhibit 5-C shows the form to be used -- the Registry Transmittal Form, SO-229.

B. Use of Continuation Sheets

Continuation sheets showing preprinted State codes and report numbers in sequence can be used in assigning new report numbers. These sheets are provided upon request, through the Regional Office. A facsimile of this form (BLS 2540) is shown in Exhibit 5-F.

C. Assigning Reporter Identification Codes

For a new report, the State determines the first available report number, leaving no number unused.

- . Do not reuse numbers which have been cancelled.
- . Record the industry code, name and plant designation, establishment location, and all other identifying information for the new reporting unit.
- . Maintain changes so that the Registry accurately reflects the identification of the panel of CES reporters on a continuing basis.
- . When changing the report identification codes (State/report number, and SIC), always update the Registry file prior to transmitting microdata under new codes; otherwise, the new control codes will fail to match the Registry and the data will be rejected.

D. Retaining a Control File of Your State's Registry

The Registry listing in report number sequence is the control list to be maintained for

- . the identification of all reporters, and
- . the continuous assignment of new report numbers.

Therefore, the State must maintain a "Control" registry file in machine-readable form or hardcopy on a continuous basis. This file must be available for review by BLS.

5.2.2 Special Handling of Registry Records for National Reporters

A. New Reporters

National Reporters send reports for all or some of their establishments directly to BLS-Washington. BLS-Washington distributes these data to the States. BLS-Washington, as the collecting agent, also maintains the Registry information for these reporters. (See Appendix D.1 for the list of National reporters.)

1. BLS-Washington prepares a Registry entry for the new National Reporter (on form SO-229 -- Registry Transmittal Form).
2. The original and 2 copies are sent to the Regional Office.
3. The Regional Office forwards the forms to the State, where a report number is assigned and entered on the forms, along with classification and identifying information from the State UI records.
4. All the forms are then returned to the Regional Office for approval.
5. The originals are returned to BLS-Washington with approved codes.
6. Approved copies are returned to the State agency.
7. BLS-Washington updates the National Registry.

B. Updating Existing National Reporters

Only BLS-Washington makes changes to the National Registry for National Reporters. If a State wishes to change industry classification or other information for a National Reporter, submit a letter to the Regional Office requesting the change and explaining the need for it. BLS-Washington may contact the National Reporter to verify the requested change. When making a change, BLS-Washington provides a Registry Transmittal Form (SO-229) and forwards 2 copies under the cover of an SO-17 transmittal form to the Regional Office, which forwards one copy to the State as notification that the change has been processed.

5.2.3 When to Change a Report Number

A. Criteria for a Change in Report Number

All data submitted under one report number should be comparable to prevent creating unrealistic trends in matched samples. Frequently, a reporter will discover that the data being reported differ from that requested on the schedule and will correct the report. In other cases, the reporting unit coverage is expanded or contracted due to various events such as

- . a business merger
- . the sale of part of the facilities, or
- . the abandonment of an establishment.

In some cases, the establishment changes reporting practices -- several units are combined into one report or one report is broken out into several different reports. Under specific circumstances, a report number must be changed depending on the participation of the reporter in the CES program.

Illustration 5-2 summarizes all report number assignments which may be made to CES reports. While all cases shown do not relate directly to changes in report numbers, for clarity all actions have been assembled in this one table. The following sections give greater detail regarding some conditions governing the assignment of new report numbers.

B. Changes in Comparability of Data

1. Changes Requiring New Report Numbers

New report numbers are required beginning with the month that the permanent changes occurs, if any of the changes in reporting listed in Illustration 5-3 occurred. The numerical references (for example, "No. 5") are the applicable case numbers from Illustration 5-2.

2. Changes Not Requiring New Report Numbers

New report numbers are not required when the conditions listed in Illustration 5-4 prevail.

Illustration 5-2BLS 790
WHEN TO ASSIGN A NEW REPORT NUMBER

<u>Reporting Change</u>	<u>Action to be Taken</u>
1. Usable BLS 790 schedule received for two consecutive months.	Assign a CES report number. Prepare Registry updates for a new report.
*2. Reporter includes (or excludes) active establishment previously excluded (or included).	Assign new CES number. Prepare Registry updates for change in report number(s).
*3. Reporter changes basis of reporting employment, payroll, or hours.	Assign new CES number. Prepare Registry updates.
*4. Reporter has change in activity requiring change in type schedule used and results in noncomparability of data reported.	Assign new CES number. Prepare Registry updates.
5. Reporter consolidates or separates BLS 790 reports which remain non-identical.	Assign new CES number(s) to the report(s). Prepare Registry updates for change in report number(s).
6. Sample member discontinues reporting.	Cancel CES report number.

* New report numbers are not required if BLS 790 data, due to the reporting change, increase or decrease by less than 10 percent and, in addition, the changes amount to less than 20 employees, \$3,000, or 1000 hours.

Illustration 5-3WHEN A REPORT NUMBER CHANGE IS REQUIRED
(Numbers refer to reporting changes in Illustration 5-2)

1. A reporter excludes data for an active establishment, department, or auxiliary unit previously included in the report. (This unit may have been sold or may still be owned by the company.) (No. 2.)
2. A reporter includes data for an active establishment, department, or auxiliary unit either just purchased or not previously included in the report. (No. 2.)
3. A reporter changes the basis of reporting employment, payroll, or hours (for instance, it is discovered that maintenance employees had been mistakenly excluded from "production and related workers" and subsequent reports include these workers). (No. 3.)
4. A reporter has a change in activity which requires a change in the schedule to be completed and results in noncomparability of data reported (e.g., reports for nonsupervisory employees may be quite different from those for production workers). (No. 4.)
5. A reporter submits separate reports by area, industry, or type of employee (such as salaried and hourly) in place of a consolidated report. (No. 5.)
6. A reporter consolidates individual reports for different classes of employees or for the same industry or area. (No. 5.)

Illustration 5-4

WHEN A REPORT NUMBER CHANGE IS NOT REQUIRED

1. Individual items on the schedule are reported for the first time (for instance, when hours or all employees are first reported) or when items previously reported are discontinued.
2. Data for a newly formed establishment are included in the report from the first month of operation of the new unit. (Use comment code 90 to identify this type of change.)
3. Operations are discontinued in an establishment previously included in the report. (Use comment code 11 to identify this situation.)
4. The change is temporary due to economic conditions which are explainable with a comment code (see Section 6 for an explanation of comment codes).

5.2.4 Making Other Changes to Reporter Information

A. Changes in Industry and Ownership Codes on the Registry File

Section 2 discusses the procedures for assigning industry codes and for identifying code changes. It is especially important that the SIC code and ownership code be kept current on the Registry File. The SIC code, along with the State code and report number, serves as the report identification control number.

Exhibit 5-B.2 describes procedures for updating industry and ownership codes on the National Registry. The codes on the monthly data schedule must match the report identification control number to be accepted.

B. Changes to Other Reporter Information

Update the Registry File regularly to reflect other changes which significantly alter the identification of the respondent. Make changes as necessary to the auxiliary code, UI account number, name, location, and county code. See Exhibit 5-B.3 for procedures.

C. How to Cancel a Reporter

When the report for an establishment has not been received for a period of at least six months and follow-up efforts have failed, the report should be removed from the active reporters on the National Registry File.

Periodically, BLS-Washington prepares listings of sample establishments for which reports have not been received for six or more successive months. These listings are sent to the State with a request to cancel those reporters which are no longer active. See Exhibit 5-B.4 for procedures to cancel reporters from the National Registry. States must maintain procedures to perform follow-up of nonrespondents on a regular basis.

D. Reinstating Cancelled Reporters

There are two program status codes used in the CES program:

- 1 - CES reporter
- 0 - CES cancelled reporter

A reporter which recently (within 30 to 90 days) has been inadvertently cancelled can be reactivated on the Registry by submitting a program status code change from "0" to "1", as outlined in Exhibit 5-B.5. Cancelled reporter records periodically are deleted from the National Registry file; if the reporter has been deleted from the files, it is necessary to resubmit all the information in the same way as for a new reporter, using the procedure for adding new records.

5.3 TRANSMITTING REGISTRY TRANSACTIONS

States should submit code changes to the Registry on a flow basis, as they occur, in accordance with the State's processing procedures. BLS-Washington will process available Registry updates before each CES microdata closing. The Regional Office is responsible for ensuring that Registry updates sent by the States are correct and complete. There are several alternatives for submitting Registry updates to BLS-Washington.

A. Transmittal of Registry Updates via the Regional Office

1. Registry Transmittal Form SO-229

States may enter changes on Form SO-229 (Registry Transmittal Form) and send the forms to the Regional Office. The Regional Office edits the State-prepared form (see Exhibit 5-C) for various items and key enters the information for transmission to BLS-Washington.

2. Punched Cards

States may keypunch Registry update information and send the keypunched cards to the Regional Office. See Exhibit 5-B for format.

3. Review by Regional Office

The Regional Office reviews changes submitted by the State agency. The Regional Office is responsible for notifying

- . BLS-Washington of approved actions, and
- . the State agency of actions taken on all changes.

4. Transmittal to BLS-Washington

Registry updates provided by the States to the Regional Offices are key entered and, once in machine-readable format, are transmitted to BLS-Washington via telecommunications.

B. Tape/Telecommunication Directly From the State to BLS-Washington

With prior Regional Office approval, a State may transmit Registry updates to BLS-Washington on magnetic tape or by telecommunications.

1. Tape

The Regional Office should notify BLS-Washington before a State submits updates on tape. Two types of updating options are available:

- . Individual Record Updates. See Exhibit 5-B for instructions for the appropriate record format.
- . Updating the Complete State Registry. BLS-Washington will process the complete State Registry against the National CES Registry. Records on the State tape which match records on the National Registry by State and report number will be treated as changes to the existing records. Records on the State tape which are not found on the National Registry will be added to the National Registry as new records. Records not on the tape which are on the National Registry will be held for cancellation pending review of the output listing and verification by the State that all such records are to be cancelled. Listings will display all ADDS, CANCELLATIONS, and CHANGES, as well as any errors which may occur. See Exhibit 5-D for transmittal instructions and record format.

For either method, enclose with the tape a transmittal form that provides the following information:

- . the Office and State sending the tape
- . the date sent
- . the office to which the tape is sent (BLS-Washington, mail code 3)
- . type of registry transmittal:
 - . individual updates, or
 - . complete State Registry update
- . tape specifications:
 - . dataset name
 - . volume serial #
 - . tape density
 - . tape labelling information
 - . block size
 - . record length of data file
 - . number of records on the tape

An example of a tape transmittal form is shown in Exhibit 5-G.

2. Telecommunication

Registry updates may be transmitted directly by the State to BLS-Washington via telecommunication with the consent of the Regional Office. (Appendix I.1 describes this procedure.)

5.4 PROCESSING AND EDITING REGISTRY TRANSACTIONS

A. Processing Cycle

Processing of Registry additions, changes, and cancellations is initiated by BLS-Washington, approximately 3 days prior to each CES closing (see Appendix H.1 for monthly closing dates).

Do not cancel a reporter from the Registry until after the third closing of the last month of data transmitted; otherwise, the cancellation will occur before the third closing and data received for that month will not be used in the third closing estimation.

Updates to the Registry should reach BLS-Washington before the receipt of the microdata for those affected reporters; otherwise, the microdata will be rejected until the Registry is updated to reflect the new reporter identification -- State code, report number, and SIC.

Nonmatched reports which have been received for that month are retained and subsequently processed against the revised Registry. Reports which did not match previously because of recent SIC or report number changes not reflected on the Registry will be processed at the third closing. If the Registry has been corrected, the data will be accepted. If the Registry is not corrected, the microdata will be deleted after three consecutive months of not matching.

B. Processing Procedure (BLS-Washington)

BLS-Washington incorporates approved codes into the National Registry file by:

- . Creating a separate Registry update file for each region and loading all Regional Office and State update transmissions into the appropriate update file.
- . Processing Registry transactions three days before each closing.
- . Generating and distributing to each Regional Office a transaction listing of
 - . ADDS, CANCELLATIONS, and CHANGES, effective at the time of processing.
 - . ERRORS generated along with transaction listings.
- . Replacing backup copies of the Registries at BLS computer processing centers -- these are the files that the Regional Offices access via terminal to determine status of individual reporters. The file available to the Regional Offices will be updated over the weekend, a couple of days after the updates have been processed.

C. Transaction Listings

The CES Registry update transaction listings are telecommunicated to the Regional Office. These updates display additions, changes, and cancellations to the Registry by State by report number. In addition, errors and duplicate transactions which are identified in the course of updating the Registry are listed for review and follow-up.

The categories on the transaction listing are:

- . ADDS -- This category displays successful additions to the Registry;
- . CHANGES -- This category is a list of all successful changes to information on existing records on the Registry;
- . CANCELLATIONS -- This category shows all successful cancellations to existing reporters on the Registry;
- . ERRORS -- This list consists of all erroneous (invalid) actions attempted, such as duplicates, invalid codes, invalid program status, or report not on the Registry. Transactions on the error list must be correctly resubmitted in their entirety.

D. Error List and Correction Procedures

There are two types of edit checks made to attempted Registry update records. The first check is to determine that the coded fields contain valid entries, such as checking some fields for nonnumeric entries. The second check is to compare the report identification codes on the update record with the data on the Registry for matching State and report number identification.

Error messages are generated for incorrect Registry input data; that is, data which do not pass the edit check. These update records have not been accepted. The Regional Office should evaluate each error to ascertain what data need to be submitted for acceptance of the record and whether to contact the State. See Exhibit 5-E for a description of Registry transaction error messages and correction procedures.

5.5 REGISTRY MATERIAL PROVIDED BY BLS-WASHINGTON

A. Semiannual Registry

In January and July each year, BLS-Washington provides the State agency with all the information currently contained on the Master Registry File at BLS-Washington.

The file, on hardcopy listing or magnetic tape, is provided in report number sequence. In addition, in January each year the file is made available on microfiche, in three sequences:

- . by report number
- . by alphabetic establishment name
- . by industry by employment size code.

Ideally, the State should request the National Registry file on magnetic tape. (See Exhibit 5-A for the National Registry File format.) The request need only be made once to receive tape every six months. The information on tape can be used for mechanical comparison with the State's registry file. Differences between State and National registries should be investigated. States are to submit updates to the National Registry as needed.

B. Six-Month Delinquency List

These listings are provided to the Regions and States semiannually, in January and in July, and identify those reporters for which no microdata have been received for 6 consecutive months or more. The date in the right-most column indicates the last month and year for which data were received. In some cases, the entry in this column consists of zeroes, which indicates that no data have been received for the reporter to date. This may occur if the reporter was recently added to the Registry and no microdata have yet been processed. The State should review the listings.

- . Compare State/report number and SIC on the listing and the actual schedule. Any discrepancies in the SIC's should be noted and corrected where appropriate.
- . If no schedule is located with the same State/report number, cancel the report on the National Registry.
- . If the reporter is "delinquent", the State should take appropriate action to solicit the information. If unsuccessful, the State should cancel the reporter from the National Registry.

NATIONAL REGISTRY FILE FORMAT

Copies of the current National Registry file can be obtained on magnetic tape upon request, as indicated in Section 5.5. The tape specifications and Registry format are as follows:

Standard Tape Specifications

Label type: Standard IBM
Density: 1600 BPI
Record length/Blocksize: 80/4000

Standard Record Layout

Data Item	Record Position	Field Length
State FIPS code	1-2	2
Report number	3-7	5
1972 SIC	8-11	4
Region code for SIC 3731	12-13	2
FIPS County code	14-16	3
Optional Area code (if used)	17-19	3
Key Reporter code	20	1
Auxiliary code	21	1
Blank	22	1
Ownership code	23	1
Program Status code	24	1
Employment Size code	25	1
U.I. Account Number	26-36	11
Establishment name	37-63	27
Report Location	64-72	9
1972 SIC	73-76	4
Region code for SIC 3731	77-78	2
"11" action and card code	79-80	2

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 5
Rev. Oct. 1985INSTRUCTIONS FOR SUBMITTING REGISTRY UPDATESEXHIBIT 5-B
Page 1 of 3New Reporter

Exhibit 5-B.1

The following information must be submitted and must be valid to add a new reporter to the Registry.

Form Column	Record Positions	Item Description	Edit Check	Valid Entries
1	1-2	State code	Numeric	Valid State FIPS code
2	3-7	Report number	Numeric	Correct report number
5	14-16	County	Numeric	Correct county code
6	17-19	Optional Area code	Numeric	Opt. Area Code or blank
7	20	Key reporter	Numeric	Leave blank "0" - Not Key reporter
		Code "1" assigned by BLS-Wash. only		"1" - Key reporter
8	21	Auxiliary Status	Numeric	"0" - Not reported "1" - Central Admin. Office "2" - Research, Development "3" - Storage (warehouse) "4" - Other "5" - Not Auxiliary Unit
		Blank		Leave blank
9	22	Ownership	Numeric	"1" - Federal Government "2" - State Government "3" - Local Government "4" - Internat. Govt. "5" - Private "6" - Private, Corporation "7" - Private, Non-Corp.
10	23			"1" - BLS 790
11	24	Program Status	Numeric	"1" - 0-4 "2" - 5-9 "3" - 10-19 "4" - 20-49 "5" - 50-99 "6" - 100-249 "7" - 250-499 "8" - 500-999 "9" - 1000 and over
12	25	Employment Size	Numeric	
13	26-26	U.I. Account Number	Alpha/Num.	Correct U.I. number
14	37-63	Establishment name	Alpha/Num.	Correct estab. name
15	64-72	Location	Alpha/Num.	Correct location
16	73-76	1972 SIC	Alpha/Num.	Correct SIC
17	77-78	1972 SubSIC	Numeric	Leave blank; generated in BLS-Wash. processing
18	79	Action code	Numeric	Must be "1" for new reporters
19	50	Card code	Numeric	Must be "1"

NOTE: Column 3 (record positions 8-11) and column 4 (12-13) are reserved for future SIC Revisions and should be left blank.

EXHIBIT 5-B
Page 2 of 3SIC/Ownership Change

EXHIBIT 5-B.2

The following information must be submitted and must be valid to change an SIC.

Form Column	Record Positions	Item Description	Edit Check	Valid Entries
1	1-2	State code	Numeric	Valid State FIPS code
2	3-7	Report number	Numeric	Correct report number
10	23	Ownership	Numeric	Valid ownership code
16	73-76	1972 SIC	Numeric	New SIC code
18	79	Action code	Numeric	Must be "2" for a change
19	80	Card code	Numeric	Must be "1"

NOTE: Do not show the program status when changing an SIC code.

Other Changes

EXHIBIT 5-B.3

For changes other than SIC, ownership, or Program Status (cancellation or reinstatement), the following columns must be completed, as well as the column(s) which are to be changed.

Form Column	Record Positions	Item Description	Edit Check	Valid Entries
1	1-2	State code	Numeric	Valid State FIPS code
2	3-7	Report Number	Numeric	Correct report number
10	23	Ownership	Numeric	Optional entry
16	73-76	1972 SIC	Numeric	Correct SIC code
18	79	Action code	Numeric	Must be "2" for a change
19	80	Card code	Numeric	Must be "1"

NOTE: The auxiliary code cannot be changed to "0" (unreported) except by using the special action code "9". Do not change the size code -- it is assigned annually by BLS-Washington.

EXHIBIT 5-B
Page 3 of 3Cancellations

EXHIBIT 5-B.4

The following information must be submitted and must be valid for cancelling reporters*.

Form Column	Record Positions	Item Description	Edit Check	Valid Entries
1	1-2	State code	Numeric	Valid State FIPS code
2	3-7	Report number	Numeric	Correct report number
10	23	Ownership	Numeric	Valid ownership code
11	24	Program Status	Numeric	"1" - BLS 790
16	73-76	1972 SIC	Numeric	Correct SIC
18	79	Action code	Numeric	Code must be "0" to cancel a reporter*
19	80	Card code	Numeric	Must be "1"

*Periodically, the cancelled reporters (action code "0") are purged from the National Registry because of file limitations. Once a reporter is purged it cannot be activated except by submitting the same information as for a new reporter.

Reinstatement of a Cancelled Reporter

EXHIBIT 5-B.5

The following information must be submitted and must be valid to reinstate a reporter, provided the record has not been deleted from the National Registry file.

Form Column	Record Positions	Item Description	Edit Check	Valid Entries
1	1-2	State code	Numeric	Valid State FIPS code
2	3-7	Report number	Numeric	Correct report number
10	23	Ownership	Numeric	Must match ownership on Registry
11	24	Program Status	Numeric	"1" - BLS 790
16	73-76	1972 SIC	Numeric	Must match SIC on Registry
18	79	Action code	Numeric	Must be "2"
19	80	Card code	Numeric	Must be "1"

Registry Transmittal Form (SO-229)

EXHIBIT 5-C
Page 1 of 2

[illegible]

**Bureau of Labor Statistics
Registry Transmittal Form**
(Before entering data, see instructions)

on the reverse) PLEASE TYPE OR PRINT
Transmitted Via

Date sent from State:

Data sent from Regional Offices

U.S. Department of Labor

Registry Transmittal Form (SO-229)

Instructions for Completing Revised Registry Transmittal Form

1a. For New Reporters

States must complete the following columns:

1. State-FIPS Code
2. Report Number (Report numbers should be assigned in sequence beginning with the lowest number.)
5. County-FIPS code
8. Auxiliary Code
10. Ownership Code
11. Program Status Code
12. Employment Size Code
13. U.I. Account Number
14. Name of Establishment
15. Location of Establishment
16. 1972 SIC Based Code assignment
18. Action Code (State should enter code "1" for new reports.)
19. Card Code (Preprinted "1")

NOTE: Columns 3, 4, 6, 7, and 9 are blank; column 17 is also blank except for SIC 3731.
(Regional Office will provide instructions for use of column 17.)

b. For Industry Code, (SIC) or Other Changes (except program status changes)

The State should enter, in the columns specified below, the current establishment identifying information.
The columns to be completed are:

- Column 1-State FIPS Code
- Column 2-Report Number
- Column 10-Ownership Code
- Column 14-Name of Establishment (Optional)
- Column 16-1972 SIC Based Code assignment
- Column 18-Action Code (Enter a "2")
- Column 19-Card Code (Preprinted "1")

Also complete the column(s) to be changed.

c. For Program Status Changes

Complete the following columns:

- Column 1-State FIPS Code
- Column 2-Report Number
- Column 10-Ownership Code
- Column 11-Program Status Code
- Column 14-Name of Establishment (Optional)
- Column 16-1972 SIC on file
- Column 18-Action Code (Enter a "2")
- Column 19-Card Code (Preprinted "1")

NOTE: The SIC and Ownership codes must match the corresponding codes on the BLS Registry file in order to make a change to the program status code.

d. For Cancellations

State agencies should complete the following:

- Column 1-State Code
- Column 2-Report Number
- Column 10-Ownership
- Column 11-Program Status
- Column 14-Name of Establishment (Optional)
- Column 16-1972 SIC on file
- Column 18-Action Code (State should enter a zero "0")
- Column 19-Card Code (Preprinted "1")

2. States can transmit requests for industry code changes and other registry changes plus information on new entrants to the survey on the same registry transmittal. It would be easier to process the actions if they were grouped—new reports together, industry changes together, etc.
3. States should forward the original and two copies of this form to the BLS Regional Office listing the required information for each reporter. Reports being resubmitted should be identified by an (*).
4. After the actions have been reviewed, the Regional Office will return to the State one copy of this form.
5. The Regional Office will retain one copy of the form and either forward the original to BLS Washington for processing or will transmit the information via the RTN system.

UPDATING THE ENTIRE STATE FILE ON THE NATIONAL REGISTRY

A. Transmittal Instructions

- . Right-justify all numeric entries.
- . All records must be in the standard registry "ADD" format (Action code "1" in record position 79).

1. Tape Specifications

- . Standard IBM header and trailer labels;
- . Data set name: DSN=BLS790.RGxx ("xx" enter FIPS State alpha code);
- . Density: 9-track; 1600 BPI;
- . Blocking factor = 50 records (4000 bytes);
- . Logical record length = 80.

2. Mailing Address

Bureau of Labor Statistics
CES Registry Update
Attn: Jim Yule, Mail Code 3
441 "G" Street, N.W.
Washington, D.C. 20212

B. Record Layout

The following information must be submitted for each reporter in the State file, using action code "1" in record position 79.

Item Description	Record Positions	Field Length	Edit Check	Valid Entries
State Code	1-2	2	Numeric	Valid State FIPS code
Report Number	3-7	5	Numeric	Correct report number
Blank	8-13	6		Leave blank
County Code	14-16	3	Numeric	FIPS county code
Optional Area Code	17-19	3	Numeric	Numeric entry or blank
Key Reporter	20	1	Numeric	Leave blank
Auxiliary	21	1	Numeric	"0" - Not reported "1" - Central Admin. Office "2" - Research, Development "3" - Storage (warehouse) "4" - Other "5" - Not Auxiliary Unit
Blank	22	1		Leave blank; do NOT zero-fill
Ownership Code	23	1	Numeric	"1" - Federal Government "2" - State Government "3" - Local Government "4" - International Govt. "5" - Private "6" - Private, Corporation "7" - Private, Non-Corp.
Program Status	24	1	Numeric	"1" - BLS 790
Employment Size	25	1	Numeric	"1" - 0-4 "2" - 5-9 "3" - 10-19 "4" - 20-49 "5" - 50-99 "6" - 100-249 "7" - 250-499 "8" - 500-999 "9" - 1000 and over
U.I. Account No.	26-36	11	Alpha/Num.	Correct U.I. number
Establishmt Name	37-63	27	Alpha/Num.	Correct estab. name
Location	64-72	9	Alpha/Num.	Correct location
1972 SIC	73-76	4	Numeric	Correct SIC
Region code for SIC 3731	77-78	2	Numeric	Leave blank; assigned by BLS-Washington
Action Code	79	1	Numeric	Must be "1"
Card Code	80	1	Numeric	Must be "1"

REGISTRY UPDATE ERROR MESSAGES

Listed below are the error messages generated for incorrect registry input data. The reports listed in error are not accepted and must be correctly submitted for subsequent processing.

Error Messages

Validity Check

'INVALID STATE CODE'

The field is zero filled, blank, nonnumeric or is greater than 56 but less than 61, greater than 65.

'INVALID REPORT NUMBER'

The field contains nonnumerics.

'INVALID SIC'

'INVALID ALT SIC'

'INVALID ALT SIC CHANGE'

The field is zero filled or contains nonnumeric, or nonexistent SIC's. SIC must conform to 1972 SIC Manual.

'INVALID A CODE'

If the auxiliary code field contains anything but 0, 1, 2, 3, 4, or 5.

'INVALID O CODE'

If the ownership code field contains anything but 1, 2, 3, 4, 5, 6, or 7.

'INVALID P CODE'

If the program status code field contains anything but 1, 2, or 3.

'INVALID S CODE'

'INVALID SIZE CODE'

If the employment size field contains nonnumeric data or zero.

'INVALID SUBSIC CHANGE'

'INVALID SUBSIC'

'INVALID SUBSIC FOR SIC CHANGE'

'INVALID ALT SUBSIC'

'INVALID ALT SUBSIC CHANGE'

This field is assigned automatically by the processing system. Changes should be made only by BLS-Washington.

'INVALID COUNTY CHANGE'

'INVALID COUNTY CODE'

If the county code field contains nonnumerics.

'INVALID K CODE'

If the key reporter field is nonnumeric. Must be "0" for new reporters.

'INVALID K CHANGE'

Key Reporter designation cannot be changed except by BLS-Washington.

'INVALID SIC FOR DELETE'

SIC must be present and match SIC on Registry.

'MISSING LOCATION'	If the location field is blank.
'MISSING NAME'	If the establishment name field is blank.
'INVALID PGM STAT FOR DELETE'	Must be equal to 1. The program status code for a cancellation must match the PS code on the National Registry. This message may also appear when a reporter has previously been cancelled. If so, no further action is necessary.
'MASTER RECORD NOT FOUND'	State/Report number does not exist on the registry file. This record may have been previously cancelled and purged; check past cancellations.
'DUPLICATE'	This message appears for "ADDS" where State and report number already exist on the National Registry. The information on file is identified as the "MASTER". Check the information on the master and submit any changes as action code "2".
'STATE & REPORT # ALREADY EXIST ON REGISTRY'	
'INVALID A CHANGE'	If the auxiliary code field contains nonnumerics or is an invalid entry. To change code to "not reported" (code "0") use action code "9".
'INVALID O CHANGE'	If the ownership code field contains nonnumeric data, or is not equal to 1, 2, 3, 4, 5, 6, 7.
'INVALID P CHANGE'	If this field contains nonnumeric data or is not equal to 1, 2, or 3.
'INVALID S CHANGE'	Invalid transaction. Employment size code cannot be changed.

Note: States cannot change the employment size code or key code. The size code is needed only for new reporters. Thereafter, the size code for each reporter is changed each year by the National system based on the reported employment used at benchmark.

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Page 3 of 3

'INVALID SIZE CODE/PRG STAT CHANGE'	Size code cannot be changed. See note.
'INVALID SIZE CODE FOR SIC CHANGE'	
'INVALID SIZE CODE/KEY CODE CHANGE'	Size code and key code cannot be changed by the State. See note.
'INVALID SIC/PRG STATUS CHANGE'	1972 SIC must be present and equal to the SIC stored on the National Registry when changing the program status code.
'INVALID OWNERSHIP FOR K CHANGE'	Ownership must equal ownership code stored on the National Registry. Key code cannot be changed by State. See note.
'INVALID KEY/PRG STAT'	Key code cannot be changed by State. The program status code on the input file must match the program status code on the National Registry. See note.
'INVALID SIC (NOT FOUND IN TC TABLE)'	Combination of SIC and ownership code is invalid or the SIC is out of scope.
'INCORRECT CARD CODE'	Card code in record position 80 is not equal to "1".
'INCORRECT ACTION CODE'	Action code not equal to 0, 1, 2, or 9.
'SIC ON INPUT MISSING OWNERSHIP'	1972 SIC & ownership code must be present.
'OWNERSHIP ON INPUT MISSING SIC'	1972 SIC & ownership code must be present.
'INVALID ALT SIC CHANGE'	Record position 8-13 should be left blank.
'INVALID U CODE'	Union code is no longer required;
'INVALID U CHANGE'	leave blank.
'INVALID SIC FOR K CHANGE'	Key code cannot be changed by the State.
'INVALID K CHNG SIZE CODE PRESENT'	See note.
'UNAUTHORIZED CHANGE NAT'L REPORT'	Do not make changes to National Reporters. Advise BLS-Washington through the Regional Office of needed changes.
'CANCELED REPORTER AND NOT CHANGING PROGRAM STATUS'	Cannot update any field of a canceled reporter (program status = 0) except to change the program status to "1" to reactivate the reporter.

Registry Continuation Form (BLS 2540) -- Facsimile

Form 2540 (Rev. 10-1-85)

Bureau of Labor Statistics
700/1718 Registry Continuation Form

U.S. Department of Labor

1. Name of Establishment _____

2. Address _____

3. City _____

4. State _____

5. Zip _____

6. Date of Report _____

7. Name of Reporting Person _____

8. Title of Reporting Person _____

9. Telephone Number _____

10. Fax Number _____

11. E-mail Address _____

12. Internet Address _____

13. Other _____

14. Other _____

15. Other _____

16. Other _____

17. Other _____

18. Other _____

19. Other _____

20. Other _____

21. Other _____

22. Other _____

23. Other _____

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87. Other _____

88. Other _____

89. Other _____

90. Other _____

91. Other _____

92. Other _____

93. Other _____

94. Other _____

95. Other _____

96. Other _____

97. Other _____

98. Other _____

99. Other _____

100. Other _____

Bureau of Labor Statistics
Current Employment Statistics Survey
Tape Transmittal Sheet -- Registry Updates and State and Area Estimates

TO : Project Manager, Federal/State Monthly Surveys

FROM (State):

DATE :

Prepare three copies of this transmittal sheet. Attach one copy with each transmittal of a CES Registry Update Tape or a State and Area Estimates Tape. Send one copy to the Regional Office and retain the third copy for your records.

	CES REGISTRY	CES STATE & AREA ESTIMATES
1. TYPE OF TRANSMITTAL	☐ Individual Record Updates ☐ Complete State Registry File Update	☐ Monthly Data ☐ Annual Benchmark Data
2. DATASET NAME	BLS790.RGxx where xx = FIPS State alpha code	BLS790.SAxx.Tymm where xx = FIPS State alpha code yy = year mm = month
3. TAPE VOLUME SERIAL NUMBER	_____	_____
4. TAPE DENSITY	☐ 9 track; 1600 BPI ☐ Other, _____	☐ 9 track; 1600 BPI ☐ Other, _____
5. LABEL TYPE	☐ Standard IBM ☐ Other, _____	☐ Standard IBM ☐ Other, _____
6. BLOCK SIZE	☐ 50 ☐ Other, _____	☐ 20 ☐ Other, _____
7. RECORD LENGTH	☐ 80 ☐ Other, _____	☐ 80 ☐ Other, _____
8. NUMBER OF RECORDS	_____	_____
Mail the tape and one copy of this form to:	Bureau of Labor Statistics Federal/State Monthly Surveys CES Registry, Mail Code 3 441 G Street, N.W. Washington, D.C. 20212	Bureau of Labor Statistics Federal/State Monthly Surveys State and Area Estimates, Mail Code 19 441 G Street, N.W. Washington, D.C. 20212

Section 6: COLLECTING, EDITING, SCREENING, AND TRANSMITTING
BLS 790 SCHEDULE DATA

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**Section 6: COLLECTING, EDITING, SCREENING, AND TRANSMITTING
BLS 790 SCHEDULE DATA****6.1 INTRODUCTION**

The major concerns of this Section are the States' collection, editing, screening, and transmittal to BLS-Washington of BLS 790 schedule data. All State agencies cooperating in the CES Survey are responsible for collecting, editing, and clarifying schedules collected in their State and sending "clean" data to BLS-Washington by scheduled closing dates for use in computing the National CES estimates.

6.2 COLLECTING BLS 790 SCHEDULE DATA**6.2.1 Preparation of Schedules by the State**

The Bureau of Labor Statistics provides each cooperating State agency with supplies of the Monthly Report on Employment, Payroll, and Hours (Form BLS 790), for use in collecting data from respondents. Only BLS-Washington approved procedures and OMB approved schedules can be used to collect data in the CES Survey. Before sending the schedules to the respondents, the State must enter certain information on the forms as indicated below. Examples of the BLS 790 schedules are displayed in Appendix B.

The bulk of the preparation of schedules to be sent to active reporters the next year is normally performed by the State in the last several months of the year, after the new schedules have been received from BLS. Initially, the State agency enters, on a new form for each respondent, the mailing information (by mechanical means if possible), the identification codes (FIPS State code, report number, and SIC), and the location-of-establishment information. Check these three items against the basic control record and the current schedule. Use particular care in entering identification codes since an error in these items is repeated in each month's tabulation until the error is discovered and corrected. After the report for December has been received and edited, enter the December data on the corresponding line of the new schedule, then file the old schedule. (Retention periods for collection forms are specified in Section 13.)

In preparing a schedule for sample solicitation, the name of the establishment, street address, city, State, and ZIP code are essential. If the establishment is one of a multiunit company, the location of the establishment may be incorporated in the mailing information or entered in the location-of-establishment box. If data are subsequently reported on the solicitation schedule, the location-of-establishment information should be verified by the respondent. For most respondents this can be accomplished by telephone contact, or by having the respondent complete an attached flyer that requests verification of establishment location.

6.2.2 Mailing to Respondent and Delinquency Control

Each month, mail the respondent's schedule so that it will reach the establishment on or about the last day of the pay period which includes the 12th of the month. Most respondents have 1-week pay periods. For these, the last day will always fall between the 12th and the 18th, inclusive.

A system of delinquency control must be developed and maintained (see Secs. 3.2.4 and 13.2.4). The system should require a follow-up no later than 2 weeks (and preferably 10 calendar days) after the close of the respondents' respective pay periods. Follow-ups may be made by mail (see Appendix C, Delinquency Post Cards), by telephone, or -- if the respondent has been chronically delinquent -- by personal visit. All efforts should be made to retain significant (Key) reporters in the sample.

6.3 REVIEW OF BLS 790 SCHEDULE DATA

6.3.1 Introduction

The review of schedules by the States normally involves both manual and computer editing and screening. Manual editing prepares schedules for keyentry. Problems can often be identified while a schedule is being logged in, or shortly thereafter, and corrective measures can be initiated before the data are put in machine-readable form. A computer editing and screening program serves an essential function in identifying questionable data and as a backstop for keyentry accuracy.

NOTE: The States must edit all data items on all reports received for each closing.

6.3.2 General Schedule Review

A manual review of BLS 790 schedules is necessary to assure completeness and to assign length-of-pay period factors to schedule data.

The following review activities are described in detail in Sections 6.3.3 through 6.5.5.

- . Check that all sections to be keyentered are complete.
- . Check that only numeric entries are entered for items that are to be keyentered.
- . Make all corrections and new entries using a red pencil.
- . Do not erase or circle entries; line through incorrect entries and substitute corrections as necessary.

- . Delete all fractions; only whole numbers are keyentered.
- . Code explanation entries and L/P information as necessary.
- . Contact respondents on questionable entries if necessary.

Avoid making any adjustments to the reported data on the BLS 790 schedule which may confuse the respondent. If necessary for keyentry purposes, transcribe the data to a substitute schedule. If a State reduces the reported data to a one-week period for processing purposes, by making notations on the original shuttle schedule, attach a flyer to the schedule explaining the reason for the changes to the respondent. This should avoid confusing the respondent when he again sees the shuttle schedule.

6.3.3 Mailing Information and Location of Establishment

Each month scan the mailing address, the related information for mailing the schedule, and the "location of establishment" to see if the respondent has made any changes that should be recorded. Record all changes of this kind in the basic record file in the State agency, and forward name and establishment location changes to BLS-Washington (see Sec. 5.2.4).

6.3.4 Record of Individual Respondent Data

Maintain a running record of the monthly data for each respondent. For this purpose, the State agency can use the Office Record Card, SO-227, supplied by BLS (see Sec. 13.2.3b and Appendix C) or an adaptation of this card. A computerized file system may also be used.

6.3.5 Period Reported

A. Pay Period to be Reported

The pay period for which data are reported must always be that which includes the 12th of the month. The first and last dates of this period are entered by the respondent in Cols. 2 and 3 of the BLS 790 schedule.

Sometimes, because something unusual occurred during the pay period which includes the 12th, such as a vacation period, strike, or inventory shutdown, an employer reports a "typical" period instead. However, in any case when the data reported are not for the period including the 12th, the respondent should be contacted with a request for the data for the correct period.

Some confusion may occur as to the pay period to be reported when the 12th of the month falls on a Saturday or Sunday. For example, some reporters pay weekly, but consider their pay periods to run only from Monday through Friday and not to include Saturday or Sunday. In these

cases, consider a Saturday the 12th to be the last day of the pay period, and a Sunday the 12th to be the first day of the pay period.

B. Number of Days Worked or Paid For

On most schedules, Col. 4 provides for entry by the respondent of the number of days during the pay period reported on which the majority of production workers worked plus those days for which the majority received holiday or vacation pay. The number of days should be reported to the nearest 1/2 day. Unless otherwise indicated, references in Sec. 6 to production workers also apply to the nonsupervisory and construction worker groups in nonmanufacturing industries.

If the pay period is longer than a week, the respondent is also requested to report (in Col.5) the number of the above days worked or paid for during the 7-day period which includes the 12th of the month and falls entirely within the pay period reported. In such a case, if the 12th does not fall on the first or last day of the pay period, there are several different 7-day periods for which a count could be reported. However, if the pay period includes the entire calendar week (Sunday through Saturday) in which the 12th falls, the count should be for that week.

6.3.6 Editing for Length of Pay Period and Multiple Data

A. General

When a respondent reports data for a pay period longer than one week, it will usually be necessary to reduce the reported hours and payroll data to 1-week equivalents. The entries in Cols. 2 and 3 of the schedule will indicate whether the pay period is longer than one week. If this is so, the editor determines the percentage reduction necessary and then either makes the reductions manually or codes the schedule in such a manner that the reductions can be made by machine after the data, edited if necessary, have been produced in machine-readable form. A table of Length-of-Pay Period (L/P) codes and conversion factors is shown in Appendix F.1.

When a respondent supplies data for more than one payroll period, or shows more than one entry for earnings (e.g., payroll and commissions), all data must be edited to a comparable basis and added (see Secs. 6.3.6.D and 6.3.8.B.2). For manufacturing reports covering more than one week, both payrolls and hours must be converted.

B. Use of the L/P Column

Regardless of whether any change must be made in the reported hour and payroll data, the editor must make an entry on each schedule in the L/P column (Col. 12) in accordance with the following criteria.

When data reported are for a 1-week period, the editor enters an "X" in col. 12. (An "X" here indicates that no machine conversion of data is necessary.) An "X" is also to be entered in that column even though the pay period is longer than a week, if the number of days worked or paid for during the 7-day period including the 12th is the same as the number worked during the entire pay period.

When the pay period for which data are reported is longer than a week, and the entry in Col. 4 is greater than that in Col. 5, the reported payroll and hours data must be converted to weekly equivalents. This is accomplished by multiplying the reported data by conversion factors as indicated below. If the conversion is done by the editor, the weekly equivalents should be entered in red -- in the special columns provided on some schedules, or otherwise, immediately above the reported data -- and an "X" entered in the L/P column. If the conversion is to be done by machine, the editor enters the appropriate L/P code in Col. 12. Cols. 4 and 5 do not appear on the BLS 790 S and the BLS 790 J-L, nor are columns provided for reporting hours. Instructions for editing payrolls reported on those forms are given in Secs. 6.5.3.B and 6.5.4.B, respectively.

An L/P code and a conversion factor, mentioned above, are essentially the same thing -- a ratio to be applied to a reported figure to reduce it to a 1-week equivalent. The conversion factor is the ratio expressed as a decimal (e.g., 0.42, 0.46). If the reduction is to be done by machine, this ratio is entered on the schedule as a whole number (e.g., 42, 46) and referred to as the L/P code. The determination of the ratio is discussed in the following section.

C. Conversion Factors

The two types of conversion factors, variable and constant, are described below. Constant conversion factors are used to reduce to weekly equivalents semimonthly and monthly payrolls reported for salaried production workers. Variable conversion factors are used to reduce hours for such workers and to reduce both the payrolls and hours of other nonsalaried production workers.

1. Variable Conversion Factors

A variable conversion factor is computed by dividing the number of days in Col. 5 by the number of days in Col. 4. For example, a

respondent reported that the majority of the production workers in the establishment worked 11 days during a pay period and 5 days during the 7-day period which includes the 12th, the conversion factor would be 0.45 (i.e., $5 \div 11$). The L/P code is this result shown as a 2-digit whole number (45). It is entered in Col. 12.

To avoid computation each time a factor or code is needed, a table of these is provided in Appendix F.1. In the stub are listed the number of days on which the majority worked during the pay period reported. The column headings show the number of days worked in the 7-day period which includes the 12th of the month. To find the L/P code for the above example, read the number which is on the line labeled 11 and in the column labeled 5. The desired L/P code is 45 (and the conversion factor is, therefore, 0.45).

The number of days worked may vary from month to month for individual establishments for a number of reasons. Among these are strikes, unpaid holidays, and temporary shutdowns. It is particularly important therefore, that each respondent who reports for pay periods longer than a week supply the information on the number of days worked by the majority of production workers each month. Otherwise, it will not be possible to determine the correct conversion factor to be used to reduce the hours and payroll data.

2. Reports for Salaried Workers and Constant Conversion Factors

a. Identifying Reports for Salaried Workers

An analysis of a salaried report will usually show that the reported payroll remains fairly constant in terms of average weekly earnings but that hours vary with the number of working days in the report period. For monthly reporters, an inspection of data reported for January-February-March will help identify salaried reports because February is a short month. For semimonthly reporters, a comparison of a report for a 2-week-and-a-day pay period with a report for a 2-week pay period will prove helpful (e.g., January and February). Reporters may show a 7-day workweek if their employees are on a salaried basis.

When a report includes both salaried and nonsalaried production workers, and many are salaried workers, request two separate reports for the establishment; one for the salaried and the other for the nonsalaried workers.

b. Use of Dual Conversion Factors

As indicated above, the hours reported for salaried workers should vary with the number of regular workdays in the pay period. Holidays falling on such days would be included since salaried workers are paid for them and holiday hours should be reported. Because hours for salaried workers do vary, use variable conversion factors to reduce such hours to a weekly equivalent.

On the other hand, since the earnings of salaried employees do not vary with the number of days worked, use constant conversion factors to reduce payrolls for such employees to a weekly equivalent. The constant conversion factors to be used are 0.46 for semimonthly pay periods and 0.23 for monthly periods. Constant conversion factors can be derived by several methods. The results obtained are, in general, identical. In the interests of uniformity and simplicity, use the factors shown here.

If variable factors were not used for hours and constant factors for payrolls, the respective converted weekly figures would indicate month-to-month variations that are nonexistent. Devise some means of readily identifying reports for salaried employees for special handling each month. The identification could be "CV" at the head of the L/P column.

Since these payroll and hour figures are treated differently, the reports must be hand-edited to a weekly basis. The hand-edited figures are entered in red -- in the special columns provided on some schedules for edited data or, lacking these columns, immediately above the data. Be sure to distinguish data to be keyentered. An "X" is entered in the L/P column.

The examples in Figure 6-1 illustrate the use of constant conversion factors for payrolls and variable conversion factors for hours. As can be seen, the resulting weekly equivalents are relatively stable from month to month even though the reported hours data vary as much as 10 percent. (The slight variation in reduced hours data are caused by the rounding of the variable factor to two digits.)

FIGURE 6-1

Examples of Use of Both Variable and Constant Conversion Factors on the Same Report

Case I. Semimonthly Report									
: Days worked or paid : : for during: :				: Reported : : data : :		: Conversion: : : factor : :		Reduced data	
Pay period	Entire: 7-day period	Production:							
	: report: which includes: Workers	: Pay- :				: Pay- :		: Pay- :	
	: period: the 12th :	: roll : Hours :				: roll : Hours :		: roll : Hours :	
Mar. 1-15	10	5	20	\$4,000	1,600	46	50	\$1,840	800
Apr. 1-15	11	5	20	4,000	1,760	46	45	1,840	792
May 1-15	11	5	20	4,000	1,760	46	45	1,840	792
June 1-15	10	5	20	4,000	1,600	46	50	1,840	800
July 1-15	11	5	20	4,000	1,760	46	45	1,840	792
Case II. Monthly Report									
Mar. 1-31	21	5	20	\$8,000	3,360	23	24	\$1,840	806
Apr. 1-30	22	5	20	8,000	3,520	23	23	1,840	810
May 1-31	22	5	20	8,000	3,520	23	23	1,840	810
June 1-30	21	5	20	8,000	3,360	23	24	1,840	806
July 1-31	23	5	20	8,000	3,680	23	22	1,840	810

D. Multiple Payroll and Hour Data

When a reporter submits data for several different payroll periods on one schedule (e.g., some employees on a weekly basis and others on a monthly basis), obtain separate reports if possible. (This does not apply to respondents reporting on either the BLS 790 S or the BLS 790 J-L.) However, if the reporter is not willing to supply separate reports, the data for each period must be converted to a weekly equivalent, the items added, and the total entered in red. Line through the reported figures in red and enter an "X" in Col. 12. If multiple payroll and/or hours data are reported for the same period, the items may be added as reported and entered in red. Line through in red the figures entered by the respondent and enter the appropriate L/P code if the conversion is to be made by machine.

6.3.7 All Employees and Women Workers

A. All Employees

For each report, compare the number of "all employees -- both sexes" with the number of women workers and the number of production workers, as indicated in Secs. 6.3.7.B and 6.3.8, respectively. Common errors are the reporting of nonproduction workers or production workers for all employees. Respondents sometimes fail to include nonproduction workers because they are paid on a monthly or semimonthly basis and/or on a separate payroll. Generally, if a respondent does not report all employees after being requested to do so, enter an "X" in Col. 6; do not substitute the production-worker figure.

An exception to the above occurs when two separate reports are submitted for an establishment -- one for nonsalaried production workers and the other for salaried production workers. On the salaried report, the all-employee figure should be greater than the production-worker total since it should include all nonproduction workers as well as salaried production workers. However, on the report for nonsalaried production workers, the all-employee figure entered should be the same as the production-worker total. The sum of the two reports will then give the correct all-employee total for the entire establishment.

If two employment figures are supplied, one for part-time and one for full-time workers, or one for weekly and one for monthly payrolls, they must be added and the total entered in red in Col. 6. Line through the original employment entries in red.

During slack seasons, some employers distribute work among the employees by having varying groups work either on alternate days or alternate weeks. As employment should be reported for the pay period which includes the 12th, employers who have various groups of employees working on alternate weeks should exclude those employees who did not work during the reported pay period. However, if the employees work on alternate days, the entire work force should be included.

B. Women Workers

It is important to distinguish between an establishment that employs no women workers and one for which data on women workers are not reported. In the first case, a "0" should be reported in column 7 for women workers. When women data are not reported, an "X" should be entered in Col. 7 and an attempt made to obtain the data from the respondent.

If a figure is reported in Col. 7, the number should not be greater than, nor otherwise unreasonable compared with, all employees. If not

reasonable, question the respondent about the reported women workers figure.

A significant change in the number of women workers is usually reflected in a similar change in the same direction in the number of all employees reported. If such a change in women workers is not reflected in the all-employee figure, obtain an explanation from the reporter.

6.3.8 Production Workers, Payrolls, and Hours

A. Number of Production Workers

Compare the number of production workers (or construction workers or nonsupervisory employees) reported with the number of all employees. Question the respondent if the production-worker figure is greater than, or for medium or large units equal to, the all-employee figure. (See Sec. 6.3.7.A regarding exceptions when two reports are submitted for an establishment). For small establishments, however, the all-employee figure may differ only slightly or not at all from the production-worker figure. For a report covering only administrative employees of a manufacturer, the production-worker items (number of employees, payroll, and hours) should each be "0".

Changes in the number of production workers are normally reflected in the all-employee figures. Should a significant change in the number of production workers not be accompanied by a corresponding change in the all employees, ask the employer to furnish an explanation. If the variation is due to a new basis of reporting, a new report number may be necessary. (See Sec. 5.2.3.)

If production workers are reported as zero ("0"), then payroll and hours should also be zero (for manufacturing reports, this applies to total payroll and total and overtime hours). If this is the case, enter an L/P code or "X" in Col. 12 regardless of the period covered by the report. If payroll and hours are reported but production workers are not, contact the respondent to obtain the production worker data.

B. Total Payroll

1. General Instructions

Examine current payroll data for each report to determine if the data are acceptable as reported. If necessary, contact the respondent for verification and/or explanation. Current payroll data should be consistent with that previously reported. A computation of average hourly earnings (AHE) aids in this comparison. In general, changes in average hourly earnings of 2% or less (e.g., 12 cents for a level of

\$6.00; 18 cents for a level of \$9.00; etc.) may be accepted for individual respondents, if accompanied by a change in the same direction in average weekly hours (AWH). Large variations should be adequately explained by information furnished to the State office. These explanations should be noted by entering the appropriate comment code (Appendix F.2) in red pencil in Col. 11, Explanation Code. When the reasons for such variations cannot be determined, contact the respondent for verification. Also consider the following factors in determining the acceptability of the report:

- a. In the construction industries, large shifts in the composition of the work force on individual projects may result in large changes in the average hourly earnings.
- b. A large change in average hourly earnings is acceptable without explanation if accompanied by corresponding changes in overtime.
- c. The occurrence of holidays during the pay period reported may result in unusual fluctuations. If the employees do not work and are not paid for holidays, the report should show lower total payroll and hours. If the employees do not work on a holiday, but are paid for the day, the data should show little change since the pay and hours paid for should be reported. If employees work on a paid holiday and receive additional pay, payroll and hours should increase. Figure 6-2 illustrates the effect of these various situations on the hours for one production worker.
- d. Relatively large variations may be accepted without explanation for small establishments, seasonal industries, and establishments which have previously explained unusual changes by "piecework, commissions, etc."

Question payroll data that end in "00" or "000" month after month since this usually indicates that the data have been estimated.

If some production workers are reported, an amount greater than zero should be reported for payroll. If this is not so, enter an "X" in the total payroll column (line through any zero entered). Also, since total hours cannot be used if payroll is not reported, an "X" should be entered for hours also, and the reported figure, if any, for hours lined through. Question the respondent about the payroll and hours data.

2. Commissions and Bonuses

Commissions paid regularly (monthly or more often) to nonsupervisory employees should be included in the payrolls reported on the BLS 790

schedule, but only that portion applicable to the pay period reported. However, irregular commission and bonus payments (quarterly, semiannual, annual) should not be included. Annual Christmas bonuses are most likely to be incorrectly included.

In the Trade division, a substantial number of nonsupervisory workers receive commissions. Consequently, for that division the data-collection schedule (BLS 790 E) includes special columns for reporting commissions (Col 9A) and the period covered by the commissions (Cols. 9B and 9C). The period in which the commissions were earned should include the pay period reported in Cols. 2 and 3. If this is so, both the regular payroll and the commission figures should be reduced to 1-week equivalents and the sum of the equivalents entered in red in Col. 9X. If Col. 9X is used, the hours figure reported in Col. 10 (also reduced if necessary), should then be entered in red in Col. 10X, and "X" entered in the L/P column. (The use of Col. 10X instead of 10 simplifies the keyentry operations.)

In some cases, respondents will report commissions earned in the previous month with current payroll data. For respondents reporting on the BLS 790 E, the entries in Cols. 9B and 9C will indicate this incorrect reporting. Other establishments so reporting may frequently be identified by comparing reports for the consecutive months of December and January. Commissions earned in December tend to be larger than those earned in January. When December commissions have been included with the January payroll, average weekly earnings for January will usually show an increase. However, to correctly reflect the money earned for December, commissions should be used with the pay for the month in which they were earned. When this type of incorrect reporting is noted or suspected, request the respondent to report commissions on a current basis. The respondent may be unable to do so, but can report them separately each month for the preceding months. In that case, it may be necessary to withhold the report from the tabulations of hours and earnings for a particular month until the report for the succeeding month is received. Then a complete payroll figure can be obtained for the preceding month and the report for that month submitted to BLS-Washington on a Schedule Substitute and Correction Form (SO-226).

C. Total Hours

As in the case of payroll data, examine hours reported for consistency with the data reported for the preceding months. Also compute average weekly hours to use in this comparison.

Generally, changes of more than one (1) hour in average weekly hours for large establishments should be explained by comment codes; for small establishments (i.e., less than 50 employees) comment codes should be supplied for changes over three (3) hours.

As indicated in Sec. 6.3.8.B, the editing procedures for hours and for earnings are to some extent interrelated and changes in the level of one may explain changes in the other. There should be an adequate explanation for large changes in aggregate hours or average weekly earnings or the respondent should be questioned. Also consider the following factors when determining the acceptability of the reported data:

1. The occurrence of a holiday during the report period can have a significant effect on the levels of both hours and earnings.
2. Relatively large variations in reported data are acceptable for establishments in seasonal industries and for respondents who have previously explained unusual changes as the result of overtime, new contracts, work stoppages, etc.
3. For manufacturing industries, large changes in gross weekly hours accompanied by similar changes in reported overtime hours are generally acceptable.
4. The seasonality of an industry may affect weekly hours. For example, in the construction industry, some contractors distribute their work instead of laying off workers during slack seasons. If considerable overtime has been worked in the past, this may also affect the hourly earnings levels.

If any production workers are reported, some hours should also be reported. If this is not so, enter an "X" in the hour column and request the respondent to supply the missing data. When hours reported repeatedly average exactly 35, 40, 44, or 48 hours per week, scheduled hours are probably being reported rather than those worked or paid for. In this event, ask the respondent to report actual hours.

D. Premium Overtime Hours for Manufacturing

1. General Instructions

Premium overtime hours data are collected only from respondents in manufacturing industries. Thus, a column for reporting these data appears only on the BLS 790 C schedules.

Data should be reported in this column (10Y) only for hours worked by production workers for which overtime premiums were paid. Employers may pay such premiums for hours worked in excess of a standard work period (e.g., the normal workday or normal workweek) depending on company policy, as provided in union contracts, or otherwise. Also, employees subject to the overtime provisions of the Fair Labor

Standards Act must be paid time-and-a-half for all hours actually worked over 40 in a workweek. In addition, when Saturdays and Sundays are not regularly scheduled workdays, company policy may provide that overtime premiums be paid for work on such days even though for the individual worker the total hours worked do not exceed the normal workweek. The same policy may apply to work on any holiday, whether a paid or unpaid holiday.

Figure 6-2 shows examples of how to calculate and summarize premium overtime hours for production workers for a variety of situations. The illustrations, which assume various payroll practices, may be useful in developing flyers for advising respondents of the correct data to be reported. They are also useful in determining what is to be included as overtime hours, when editing the manufacturing schedules.

Either a figure or a zero (0) should have been entered by the respondent in Col 10Y of the BLS 790 C. When no entry has been made, enter an "X" and send a flyer to the respondent the next month calling attention to the item. If zero ("0") has been entered but the respondent's comments regarding increases in average hourly earnings and/or weekly hours indicate premium overtime, question the respondent. If the respondent cannot report the proper data, change the zero to an "X".

Encourage respondents to comment on significant month-to-month changes in the overtime data reported. This is particularly important when overtime hours are large in proportion to total hours. When the pay period reported is longer than one week, convert both total and overtime hours to weekly equivalents.

2. Incorrect Reporting

There are a number of ways in which premium paid overtime hours can be incorrectly reported. Among them are:

- a. Conversion of premium paid overtime hours to straight-time equivalents. This is the situation when the respondent reports two hours paid for at time-and-a-half as three premium overtime hours.
- b. Reporting premium paid overtime hours as half-time hours. This occurs when the respondent records two hours paid at time-and-a-half as two hours straight-time and one hour penalty time, the latter hour reported in the overtime hours column.
- c. Inclusion of hours worked in excess of the standard work period but not paid for at premium rates.

- d. "Double-counting" overtime by misreading instructions for columns 10 and 10Y. An employer will add the entry in column 10Y into column 10 which already includes overtime hours.
- e. General errors in reporting premium overtime hours. This category includes omission of premium overtime hours worked by production workers during the pay period reported, inclusion of premium overtime hours for nonproduction workers, mistakes in tabulation and transcription, etc.

3. Identifying Improper Reporting

If the number of overtime hours shows a substantial increase over the previous month, and is large in proportion to total hours, then both gross hours and payrolls should also increase. When the number of overtime hours is small in relation to total hours, the overtime hours and overtime pay may have little effect on the gross payroll and hours for the plant.

For industries in which the normal workweek is 40 hours, the following tests may be applied to determine whether there is possible incorrect reporting of overtime hours:

- a. Overtime hours may be underreported if the total hours minus the overtime hours, divided by the number of production workers (i.e., average straight-time hours), is greater than 40.
- b. When 10 percent or more of total hours are reported as overtime and the average straight-time hours, as calculated in (a), is equal to 38 hours or less, the number of overtime hours may be overreported.

Naturally, the figures of 38 and 40 hours do not apply to establishments in industries paying overtime after a "normal" workweek of less than 40 hours. For example, in industries where the "standard" week is 35 or 37.5 hours, the criteria in the text for overreporting should be 33 or 35 hours, respectively.

In general, the Fair Labor Standards Act requires payment of not less than one and one-half times an employee's regular rate for all hours over 40 worked in a workweek for employees engaged in, or producing goods for, interstate commerce. However, the act does provide for some partial and complete exemptions from this provision. Some of the specific complete overtime exemptions which the act (as amended through 1977) provides apply to types of employment which may be found

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in certain manufacturing industries. The exempt employees and the manufacturing industries in which they may be found are shown below.

SIC of manufacturing
industry affectedEmployees exempt

2099

Any employees engaged in the processing of maple sap into sugar (other than refined sugar) or syrup.

241, 242

Any persons employed in planting or tending trees, cruising, surveying, or felling timber, or in preparing or transporting logs or other forestry products to the mill, processing plant, railroad, or other transportation terminal, if the number of employees employed by his employer in such forestry or lumbering operations does not exceed eight.

2711

Any persons employed in connection with the publication of any weekly, semiweekly, or daily newspaper with a circulation of less than four thousand, the major part of which circulation is within the county where published or counties contiguous thereto.

In addition, partial exemptions for a limited number of weeks from the act's overtime requirements are provided for employees in certain specified industries. Thus, the report of an establishment in one of these industries, or those cited above, may indicate high average weekly hours with few or no premium-paid overtime hours reported. This report could be correct. If the establishment is known to have been operating under an exemption to the FLSA during the report week, comment code 16 (overtime worked without premium pay) should be entered in Col. 11.

If editing indicates that the overtime hours figure may have been misreported, request the respondent to review the entry. However, do not contact the respondent if fewer than 100 overtime hours are involved. If such a report is otherwise acceptable, the data given should be used in the tabulation. If a respondent cannot report the proper data, enter an "X" in column 10Y.

Figure 6-2

EXAMPLES OF CALCULATION OF PREMIUM OVERTIME HOURS FOR ONE PRODUCTION WORKER 1/
(Scheduled Hours - 8-Hour Day, Monday through Friday)

A. WEEK WITH NO HOLIDAY					B. WEEK WITH HOLIDAY		
	: WORKED OUTSIDE OF SCHEDULED HOURS AT- :					: Did not work	
	: _____ :					: on Paid	
	: <u>PREMIUM RATE</u> _____ :					: Holiday but	
Workweek	: Over 40 :	Week- :	Over 8 :	Straight :	Workweek	: worked Saturday	
	: Hours :	End :	Hours :	Time :		: Straight-Time	
	: in week :	work :	in day :	Rate :		: Rate	
SUN 9/9	XX	XX	XX	XX	SUN 11/10	XX	
MON 9/10	8	XX	8	8	MON 11/11	8	
TUE 9/11	8	XX	8	8	TUE 11/12	8	
WED 9/12	8	8	8	8	WED 11/13	8	
THU 9/13	8	8	10 (2)	10	THU 11/14	8	
FRI 9/14	8	8	XX	XX	FRI 11/15	8	
SAT 9/15	8 (8)*	8 (8)	XX	XX	SAT 11/16	8	
TOTAL HOURS	48	32	34	34		48	
PREMIUM HOURS	8	8	2	0		0	
C. IN MOST OF THESE EXAMPLES EMPLOYEE WORKED 8 HOURS ON VETERANS DAY (NOVEMBER 11)							
	: WORKED ON PAID HOLIDAY AT-- :				: NO REGULAR PAY FOR HOLIDAY		
	: _____ :				: _____ :		
	: Straight-	: <u>PREMIUM RATE</u> _____ :			: Holiday	: <u>Holiday Work At</u>	
Workweek	: Time	: 5-Day	: 6-Day	: 3-Day	: Not	: Straight- : Premium	
	: Rate	: week	: week	: week	: Worked	: Time Rate : Rate 2/	
SUN 11/10	XX	XX	XX	XX	XX	XX	XX
MON 11/11	16	16 (8)	16 (8)	16 (8)	XX	8	8 (8)
TUE 11/12	8	8	8	8	8	8	8
WED 11/13	8	8	8	8	8	8	8
THU 11/14	8	8	8	XX	8	8	8
FRI 11/15	8	8	8	XX	8	8	8
SAT 11/16	XX	XX	8 (8)*	XX	XX	XX	XX
TOTAL HOURS	48	48	56	32	32	40	40
PREMIUM	0	8	16	8	0	0	8

NOTE: In the example shown, the figures in parentheses indicate the number

of premium overtime hours included in the total hours for which the employee was paid for that particular day. An asterik (*) indicates the premium pay was required by the Fair Laobr Standards Act.

1/ In general, the Fair Labor Standards Act requires premium pay only for hours worked in excess of 40 in any one workweek. However, frequently, company policy or union agreements require such pay for weekend and holiday work and/or for hours worked in excess of 8 in any one day, regardless of the total number of hours worked in the particular week.

2/ Some agreements specify no pay for holidays not worked, but if work is performed on a holiday, it must be paid at overtime rates.

6.3.9 Comments

A. Purpose

Proper preparation and analysis of area, national, or State employment statistics require the explanation of unusual changes in reported data. Comments are especially useful in preparing analytical text on employment, hours, and earnings series both in the States and at BLS-Washington. The comments provide a factual basis for determining the conditions responsible for noteworthy changes in these series at the published level. An acceptable explanation (i.e., a coded comment) for an unusual change will enable BLS-Washington to use a report for national estimates without further questioning. A respondent's comment may also indicate to the editor that there is an error in the reported data and that a correction should be obtained before the report can be considered usable.

B. Sources of Comments

Encourage respondents to supply explanations of the reported data in the comments section of the schedule. This may be accomplished by tactful questioning of the respondent about significant changes for which explanations are neither furnished nor apparent. A flyer attached to the schedule may be used periodically to solicit specific comments.

When comments explaining unusual variations are not available from the employer, other sources such as newspapers, strike reports, reports from local offices of the State agency, trade and union journals may provide information about the particular plant or employer. Occasionally, the reason for a current trend may be deduced from comments on a prior trend (e.g., a prior decrease in employment because of a power shortage may be adequate information to explain a subsequent increase in employment).

Do not assume that comments reported by other employers in the same industry or area apply. If the generalization is valid, that fact will usually be reflected in both the State and the national series.

Neither, in general, should the editor deduce comments from the reported statistical data since frequently a number of rationalizations may be drawn from a given set of figures.

C. Comment Codes

1. Selection Criteria

Explanations reported by respondents or known at the State office will usually be assigned numerical comment codes selected by the editor from the list of codes given in Appendix F.2. If two or more codes seem applicable, the criteria given below should be applied to determine which codes to use. On the other hand, not all explanations should be coded. Do not assign comment codes for insignificant changes (e.g., the comment "Two high-paid workers laid off" need not be coded). Nor should contradictory or inapplicable explanations provided by the respondent be coded (e.g., the comment may indicate "seasonal increase" while a drop in employment, payroll, and hours is shown by the data reported). If a comment code is assigned, enter it in column 11 (Explanation Code).

2. Code Structure

Comment codes are presented as a 3-part list:

Section 1 - Economic Comments

Comments in this group will often explain changes at the industry level as well as indicate causes for changes reported for a specific establishment. They are, therefore, significant for the analysis of data for publication in addition to verifying data for individual reports. In selecting the proper comment code to be assigned, the use of an Economic Comment, if applicable, is always the first preference. Further, where there is a choice among Economic comments, enter the comment code for the data item that shows the most significant change.

Section 2 - Activity Comments

Comments in this group describe situations which affect individual establishments but which generally do not occur in sufficient concentration to influence the industry trends. Use comment codes from this section in preference to codes 91, 92, or 93 of the Operating Comments, if such a choice needs to be made. Among Activity Comments, the comment code for the most significant change should be entered.

Section 3 - Operating Comments

Comments in this group always originate with the editor, not the respondent, and describe pertinent processing operations for a specific report. Comment code 96, "data used pending verification", may be used in those cases in which the reported data need verification or explanation but do not appear to be entirely unreasonable.

A block of numbers 61-89 has been allocated to "Special State Assigned Codes". The States may assign special editing codes in this series to be used within their own systems. However, they must not duplicate nor supersede any comment code already coded since the comments listed are needed for interpretation of the national series as well as for those for the States and areas.

6.4 SITUATIONS REQUIRING SPECIAL HANDLING

6.4.1 Strikes and Shutdowns

When employees of an establishment are on strike during the entire pay period reported, or when the establishment is temporarily shut down during the entire pay period reported, the report should show lower employment figures than those reported for the previous month, since persons not working at all during the entire pay period reported should not be counted as employed. Enter the appropriate comment code in col. 11.

If the pay period reported is longer than one week, and some employees worked for some period during 7-day period that includes the 12th of the month and falls entirely within the pay period reported, even though the establishment was shut down or employees were on strike during the remainder of the pay period reported, review the data using the regular editing procedures, since persons who worked during the 7-day period should be counted as employed.

However, if the establishment was completely shut down during the entire 7-day period that includes the 12th of the month and falls entirely within the pay period reported, but operated on and reported data for some period within the entire pay period reported, but not within the 7-day period, edit the data manually as follows:

- . Enter an "X" as the L/P code.
- . Line through each entry in red.
- . Insert, in red, a new all employee figure derived by subtracting the reported production workers from the reported all employees.
- . Enter an "X" for women workers unless it is known with reasonable certainty that the establishment has no women among its production workers. In that case use the reported women worker figure.
- . Enter "0" (zero) for production workers, payroll, and hours.

Only rarely are all nonproduction workers idled because of a strike of production workers, even though the respondent or news stories may indicate a complete shutdown. So, during the period of the strike or shutdown, continue to mail the BLS 790 schedule to the reporter in order to obtain a count of any maintenance or nonproduction workers continuing to work.

6.4.2 Vacations

A special reporting problem occurs when a plant closes temporarily for vacations. Some of the workers of these establishments may be paid for the entire vacation period, while others may be paid for only part or none of the period. For such an establishment, the employer should report the number of employees who worked during the period or received vacation pay, together with the amount of vacation pay paid and the number of hours for which pay was received. Workers on vacation who are not paid for any part of the pay period reported should be excluded.

When some establishments shut down for vacation, the employer made lump sum payments which are not necessarily related to the number of hours of vacation. Hours relating to vacation pay are, therefore, not available. Coal mining firms frequently follow this practice. When the vacation shutdown occurs in such plants during the regular report period, the reporter should supply the amount of the lump sum vacation payment and the number of production workers receiving vacation pay. The number of hours is derived by dividing the lump sum payment by the average hourly earnings at that plant the previous month or for a recent month if the immediately preceding month is atypical. (If information concerning the lump sum payments cannot be obtained and such payments are substantial, exclude the hours and earnings data from the tabulation for that month.) This procedure will tend to keep average hourly earnings unchanged from the previous month and reduce average weekly hours. Data relating to the vacation should be added to data for any payroll and hours actually worked during the report period.

Employers should not report a substitute period when vacations occur during the midmonth payroll period. A report that shows closure for vacation and does not supply payroll and hours data should be questioned since most companies pay for at least part of the vacation period of some employees. Some employers defer payment of vacation pay earned by employees who leave the company during the year until the regular plant vacation shutdown period. Such an employer may incorrectly include data for such former employees in the employment, payroll, and hours figures on a report covering the vacation period.

Attaching a special vacation flyer to the schedule during the vacation period is frequently helpful in obtaining correct data.

6.4.3 Seasonal Operations

In highly seasonal industries such as canning, establishments may close for an extended period of months. During such a period, the States should submit reports to BLS-Washington each month showing zeros in the pertinent columns. The seasonal changes will then be reflected in the national estimates.

6.5 INDUSTRY SCHEDULES REQUIRING SPECIAL EDITING AND PROCESSING

6.5.1 Multistate Construction Reporters

Certain construction firms which operate in several States report data for all State operations to a single State agency on a one-month schedule, the BLS 790 B-M. These firms, designated as "Multistate Construction Reporters," are shown in Appendix D.3. (Additions and deletions to the list are issued by BLS-Washington in the form of a revised Appendix D.3.)

These firms are each characterized by the following:

- . They undertake large construction projects out of their home State (i.e., the State in which a firm's central office is located).
- . The monthly employment average is high.
- . Payroll data for all sites in all State are compiled in a central office.
- . By agreement, the central office each month reports current employment statistics for all sites to the State agency in its home State on the BLS 790 B-M, a single month schedule.

The first three of the above criteria may also apply to some other large construction firms, which do not, however, report on the BLS 790 B-M.

Responsibility for the collection, editing, and control of the monthly reports from a multistate reporter, and for the preparation of the schedule transcript forms discussed below, lies with the home State agency.

A State agency wishing to obtain reports on a project operated by an out-of-state firm should first check Appendix D.3 to determine whether the firm is listed. If the firm is on the list, a request should be made to the agency in the home State. (Addresses of the State agencies are given in Appendix D.4.) If the firm is not on the list, direct the request for data to the site. If this request is unsuccessful and it is believed that employment at the site will reach a peak of at least 100, direct solicitation of the home office of the firm may be made.

A. Editing and Controlling Multistate Construction Reports

Since a multistate construction reporter covers all of its operation on a single schedule (BLS 790 B-M), the collecting State agency performs the following special editing:

1. Compute average hourly earnings and average weekly hours for each location reported. If these averages appear unreasonable and no explanation is known, contact the employer for verification or explanation. Because of the interarea operation of multistate firms and also because of a tendency to report by project within an area, low averages for weekly earnings and hours for nearby areas or projects may indicate that some employees are being reported on more than one payroll. For example, suppose the data reported and averages computed were as follows:

<u>Location</u>	<u>Construction workers</u>	<u>Total hours</u>	<u>Computed average weekly hours (AWH)</u>
County A	56	1008	18.0
County B	67	1273	19.0

Although 56 workers are reported in County A and 67 in adjoining County B, the low average for weekly hours for each location suggests that some employees may have worked in both counties and the respondent is reporting duplicate employment. In such cases, question the firm to determine whether the employees were carried on more than one payroll and counted more than once. If the respondent is reporting the same employees for more than one location, request him to report them (with the appropriate payrolls and hours) on the basis of where they worked the longest time. That is, he should include all payroll and hours for those employees of that location. Then the employee total for each area will be an unduplicated figure and the State total should agree with the figure reported on the UI contribution report.

2. Maintain a monthly record of the States in which a multistate construction firm operates; Form SO-220, Historical Record of Multistate Construction Firm (see Appendix C) may be used for this purpose. Although it is expected that these firms will operate from time to time in different areas and States, inspect the BLS 790 B-M reports for omission of data. For example, when a firm has been reporting operations in 7 or 8 States and submits a report which does not show operations in any of these States, question the firm to determine if data were omitted or if the projects in the missing States were completed.
3. When a multistate firm reports -- and has been verified to have -- no operations in a State or area in which operations existed in the

previous month, enter zeros on the schedule for data for the location of the finished project together with comment code 11. Similarly, when a multistate firm reports operations in a State or area where operations did not exist previously, insert comment code 90 in the comments column.

4. Should a multistate report cover a pay period longer than one week, reduce the hours and reported payroll to a 1-week equivalent.

B. Transcript for Multistate Construction -- Form SO-228

When the editing of a multistate report is completed, the home State is responsible for sending a transcript of the appropriate edited data by area to each State in which the multistate firm operates. The data are sent on an SO-228, Transcript for Multistate Construction Firm (see Appendix C). The home State, when completing the code boxes, enters in the "State" box the FIPS numeric State code of the operating State to which the data are sent, and the company name. (Enter the complete name of the firm so that the operating State agency can properly identify the company and check it against the UI files.) Code all comments and enter the codes on the transcripts. When a reporter comments that operations have just begun in a given area and this is the first month of operation within the State, enter comment code "90" and prepare a transcript showing zero employment, hours, and earnings for the previous month. Similarly, prepare a transcript showing zero data for the month after operations at a location have been discontinued. (Use of the SO-220 form will facilitate providing this kind of information.)

Upon receipt of a transcript, a State agency incorporates data into its monthly matched sample tabulations in the same manner as data received directly on a BLS 790 schedule. The State also transmits the microdata for the reporter to BLS-Washington along with other microdata. The State agency is responsible for assigning a report number and SIC code to each unit, and for maintaining a record for each unit on the CES National Registry.

6.5.2 Federal Government -- Christmas Postal Service Employment

Reports from Postal Service establishments may show a November-December increase and a corresponding December-January decline to reflect the hiring of temporary employees for the Christmas rush period. Estimating Postal Service employment is discussed in Sec. 8.8.8.

6.5.3 Education Reports -- BLS 790 SA. Education Employment During the Summer Months1. Special Editing of the BLS 790 S

All regular faculty members must be included (by the reporter, or as a result of the editing process) in the BLS 790 S all-employee totals for the summer vacation months and comparable periods even if they are not specifically paid for those months.

Faculty members who are paid for 12 months of employment should be reported by the respondent in Col. 8 and the respondent should include them in the all-employee total for each month of the year. Payrolls for these faculty members should also be reported for each month of the year.

Frequently, however, faculty members paid on a 12-month plan receive "double" or "triple" salary checks in one month, and the respondent fails to allocate either employment or payrolls to the proper months. To alleviate this situation, the schedule carries a note requesting that if some lump-sum payments are included in the payrolls reported for a given pay period, the respondent should indicate in Col. 13 of BLS 790 S the amount of such payments, the pay periods to which the lump-sum payments relate, and the number of faculty members affected.

Attach flyers to all schedules for the month of May, asking specifically for information on any lump-sum payments included in the data reported for May or June. This information will make it possible to edit the schedules properly for employment and payrolls during the summer months.

In school systems which pay teachers' salaries only during the school year (usually over 9 or 10 months), the respondent should not report regular faculty members on vacation in Col. 9 nor include them in the all-employee totals for these months. In these cases it is necessary for the editor to add the number of regular faculty members to the all-employee totals in the editing process. The following example illustrates this procedure:

If it is assumed that May is the last month of the school year prior to the vacation period, then the May figure for regular members of the faculty would be accepted for the vacation months. Each month of the vacation period, the difference between the figure actually reported for regular faculty, and the May figure would be added to the all-employee figure reported. This total should be entered in red in Col. 6 of the schedule. Make no change in the reported figures for regular faculty members. Women worker data reported during these months cannot be used since figures on women regular faculty members

are not collected. Enter an "X" in Col. 7 and line through any reported figure in that column. If women worker series are published, use the women/all employees (ww/ae) ratio for an earlier month (i.e., May) to project estimates of women workers during summer months.

Number of Employees

Col. 1 <u>Month</u>	Col. 6 <u>Both Sexes</u>	Col. 7 <u>Women</u>	Col. 8 <u>Regular members of the faculty</u>
April	1,160	400	950
May	1,090	385	900
June	955 (100)	X	45
July	950 (90)	X	40
August	940 (80)	X	40
September	1,110	420	910

Even though the number of regular faculty members are "edited into" the all-employee total for the summer months, this total may decline over these months since school-bus drivers, cafeteria workers, substitute teachers, etc., should not be reported unless they were paid for these months.

2. Schools Completely Closed During Summer

Special handling of the schedules for schools which are completely closed during the summer is necessary. To determine whether a school will be closed, attach a flyer to the schedule mailed for March data asking the respondent whether the office which prepares the report will remain open during the summer vacation. If the office is to be closed, the respondent should enter on the flyer the beginning and ending dates of the closed period. Do not return the schedule to the respondent until after the opening date specified. However, enter on the schedule, as the all-employee figure, the number of regular members of the faculty reported for the month immediately preceding the start of the summer vacation. Forward the data to BLS-Washington each month of the vacation period. Mail schedules in the usual manner to offices which remain open.

B. Payrolls on the BLS 790 S

Edited employment data and the reported payroll data are not comparable in concept during the summer months. Therefore, no weekly earnings figures should be prepared from these data, and payroll indexes and aggregates should be properly footnoted to indicate noncomparability with employment data. However, reported employment and payroll data on

these forms should be comparable. Therefore, it is both appropriate and necessary that respondents be asked to explain changes in payrolls which are inconsistent with changes in reported employment.

1. Use of the L/P Column

If several payrolls covering periods of varying lengths are reported in schedule Cols. 9A through 9D, reduce the data for each payroll to a 1-week basis. Add the edited figures together, enter the total in Col. 9X, and enter an "X" in Col. 12. Line through the reported payrolls in red. The same procedure can be followed if only one payroll is reported. However, in the latter case, the one payroll figure can be reduced by machine. If this is desired, only the appropriate L/P code need be entered on the schedule in Col. 12. In all cases, use constant conversion factors.

2. Editing

Although it is necessary to adjust the all-employee count to include regular faculty who are paid in 9 or 10 equal monthly installments, the payrolls for these summer months must be accepted as reported, even though low, provided that they bear some reasonable relationship to the reported (not the edited) all-employee figure. An estimated salary figure for the number of faculty who are "edited into" the all-employee count must not be added to the reported payroll. (This assumes, of course, that faculty members are being paid in 9 or 10 equal monthly installments, and that there is no evidence of a lump-sum payment in a previous month which might be applicable to the summer months, as described above.)

Payroll data reported on the education schedule often contain lump-sum payments (usually retroactive) made to teachers for the quarter, semester, or year for activities such as coaching (athletic teams or dramatics), teaching adult education, summer school, evening school, or "off-campus" courses, or payments made to student help, etc. The BLS 790 S instructions direct the respondents to indicate the amount of such payments, the periods covered by the payments, and the number of employees affected. When this information is provided, prorate the amount and correct the regular payroll to include only that part of the payment appropriate to the current midmonth period. Enter the corrected data in red in Col. 9X and line through the reported figures. Submit Schedule Substitute and Correction forms (SO-226) to BLS-Washington (see appropriate address in Exhibit 6-C), giving adjusted data for previous months. When the information cannot be obtained, use the data as reported (including the lump-sum payments).

Another common type of irregular reporting is the inclusion of lump-sum payments for faculty members for vacation months, usually in

the payrolls for May and June. Although the note on the schedule should obtain the necessary information, attach a flyer to all schedules for the month of May, calling special attention to this item (see Sec. 6.5.3.A).

When schedules are received which obviously include a lump-sum payment applicable to the summer months, and additional detail is not obtained by the flyer described above or by special inquiry, there are only two acceptable procedures for processing the schedules:

1. When there has been a change of less than 5 percent in the faculty or all-employee counts between the "lump-sum month" and the month preceding it, payroll may be estimated for the "lump-sum month" and the difference between this estimate and the amount reported may be prorated over the summer months. (It is incorrect to prorate the entire payroll for the "lump-sum month" over the subsequent summer months.) Line through the reported data in red and enter the estimated payroll in Col. 9X. Enter the prorated payroll figures for the summer months in the comments column. If the school remains open during the summer, additional payroll data will be reported monthly for the nonteaching staff. Add these reported data to the prorated pay for teachers during these months and enter the totals in Col. 9X. Line through the reported data in red. If there is no additional money paid during the summer, or if the school is closed, enter the prorated payroll figure in Col. 9X for the appropriate month, at the same time enter the employment estimate for "regular faculty" (see Sec. 6.5.3.A.1).

2. Or the reported payroll data must be eliminated from the payroll tabulations by lining them out in red and entering an X for the months for which lump-sum payments were reported earlier, probably June, July, and August, or July and August, as judged by the low payrolls reported for these months. (These lump-sum payments cannot be edited at BLS-Washington as in the case of lump-sum payments for extracurricular activities discussed earlier in this section.) Also it is incorrect to eliminate the data on payrolls for the "lump-sum month" only, while retaining the payroll data reported for subsequent months affected by the lump-sum payment. For example, if data reported for May contain a lump-sum payment with no information on the months to which it is applicable, and if low payrolls are reported for June, July, and August, this schedule must be eliminated from the tabulations of payroll data for May and cannot be included again in the matched tabulation before

September-October. (The report should, of course, be included in the employment tabulations throughout the summer months, as indicated in Sec. 6.5.3.A.)

6.5.4 State and Local Government (Except Schools) Reports -- BLS 790 J-L

A. Elected and Temporary Employees

Members of State and local legislative bodies should be reported each month of the year (whether or not the legislature is in session) if they are on an annual salary. If they are paid only during the months in which the legislature meets, however, include them in the employment total only in those months. In either case, their place of employment is the location where the legislative body meets. Temporary employees such as those hired for registrations, elections, etc., or those employed to aid in snow removal, flood control, or similar work in connection with fire, flood, or weather should be included in the report only if they worked and received pay for the pay period which includes the 12th of the month.

B. Payrolls on the BLS 790 J-L

1. Use of the L/P Column

If several payrolls covering periods of varying lengths are reported in Cols. 9A through 9D, reduce the data for each payroll to a 1-week basis. Add the edited figures together, enter the total in Col. 9X, and enter an "X" in Col. 12. Line through the reported payrolls in red. The same procedure can be followed if only one payroll is reported. However, in the latter case, the one payroll figure can be reduced by machine. If this is desired, only the appropriate L/P code need be entered on the schedule, in Col. 12. Use the constant conversion factors in all cases.

2. Editing Data for Pay Periods Longer Than One Month

Some employees engaged in general (nonschool) functions of State and local governments are paid on a quarterly, annual, or semiannual basis. BLS 790 J-L instructions direct the respondents to prorate these amounts over the payroll periods affected. In some instances, however, the reporter may enter in the additional payroll columns provided, the amount of such payments and periods covered. When this occurs, prorate the amount and correct the regular payroll to include only that part of the payment appropriate to the current midmonth pay period. Enter the correct data in red in Col. 9X. Submit Schedule Substitute and Correction forms (SO-226) to BLS-Washington for adjusted data for previous months.

6.5.5 National Reporters and Reporters with Special Arrangements

Certain firms, usually referred to as "national reporters", send reports for all or some of their establishments directly to BLS-Washington. These firms are listed in Appendix D.1. BLS-Washington edits all reports for these firms and sends copies of the schedules to the States involved. In addition, monthly memorandums are used to transmit data concerning Western Union, interstate railroads, etc. All communications with national reporters must be routed through the BLS Regional Offices. National reporters are coded with a "9" in the Key Reporter field of the CES National Registry.

A few firms, called "special arrangement reporters", report centrally for a number of establishments to a BLS Regional Office or directly to a State. These firms, for which special solicitation or contact arrangements have been made, are listed in Appendix D.2. The special arrangements noted must be carefully observed. A reporter may become a special arrangement reporter if the firm being solicited would rather report for several establishments to one central office at the same time. The Regional Office may arrange the collection procedure and advise F/SMS so the procedure may be documented in Appendix D.2 of the Manual.

6.6 EDITING AND SCREENING BLS 790 SCHEDULE DATA

6.6.1 Introduction

Once the schedules have been reviewed in preparation for keyentry, convert the data into machine-readable form for machine processing.

A computerized validity edit and data screening system is essential in order to process large amounts of data efficiently according to standardized edit and screening criteria.

6.6.2 Validity Edits

Perform the following validity edits to reject invalid entries and impossible relationships of data. Use other edit checks to reject duplicate reports and report numbers that do not match with the Registry (control) File.

A. Nonnumerics: This check rejects any field in which there are invalid (unacceptable) nonnumerics. Compare the entry to the schedule for correct data.

B. Blanks: This check flags any record with the reported employment field blank. Before accepting the record, check the AE figure on the schedule.

C. If the number of all employees reported is less than the number of production workers reported, the report is rejected. Correct all employees and/or correct production workers figures.

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- D. If the number of all employees reported is less than the number of women workers reported, the report is rejected. Correct the all employee and/or the women worker figures.
- E. If overtime hours are reported, and the SIC code is not a value from 2000 to 3999, (i.e., not a manufacturing industry), the overtime hours field is rejected. Overtime data is collected only for manufacturing industries.
- F. If the total hours reported are less than the overtime hours reported, both fields are rejected. Correct the total hours and/or the overtime hours.
- G. If the payroll and the total hours are properly reported, but the number of production workers is not reported, all three fields are rejected. Review these items and the L/P code, and make the necessary corrections. (This edit check is not applied to State and local government reports.)
- H. If the number of production workers reported is zero and the payroll and/or worker hours values are not zero, all of these items are rejected. Review these items and the L/P code and make the necessary corrections.
- I. If the total hours are reported as zero, but the overtime hours are reported as greater than zero, the payroll, total hours, and overtime hours are rejected. Review these items and the L/P code and make the necessary corrections.
- J. If reported payroll divided by the reported total hours results in an average hourly earnings value which is less than \$0.99 or greater than \$40.01, the payroll and total hours fields are rejected. Review the payroll, hours, and the L/P code and make the necessary corrections.
- K. If the reported total hours divided by the reported production workers reported results in an average weekly hours value equal to 35, 37.5, 40, 44, or 48, the report is listed for review. If the average weekly hours repeatedly equal one of these values, scheduled hours are probably being reported, rather than the hours worked or paid for. In this event, request the respondent to report actual hours rather than scheduled hours.
- L. If the L/P code field is nonnumeric, blank, or has a value less than 0.19 or greater than 0.66, the payroll and hours fields (total, and overtime if applicable) are rejected. Review these fields and make the necessary corrections.
- M. If the edit system is designed to process only one month of data at a time, and the month and year of the report is older than the month and year of the closing being processed, the report is listed on the error report. Verify the month and year and take corrective action if necessary.

- N. If the Report identification field (ID)--State, Report Number, SIC Code--is blank or nonnumeric or it differs at all from the Report ID on the Registry, the report is rejected. Determine the proper Report ID and take appropriate corrective action.
- O. If the Report ID--State, Report Number, SIC Code--reported for a month is identical to the Report ID of a report already on file for the same month and the most recently received report is not coded as a correction, it is rejected. If the data also differ, determine which report is correct and take appropriate corrective action.

6.6.3 Data Screening

The screening of data differs from the editing of data in the following manner. Editing identifies and eliminates data that have errors in the structure of the report or gross errors in the data itself. Examples include: incorrectly formatted data or reporter identifying characteristics, reporters which are not valid CES reporters, and sample data that have gross economic inconsistencies (e.g., $PW > AE$).

Screening is performed on data that have passed all edit checks. Screening evaluates the economic reasonableness of the reported data. Screening is best accomplished by comparing the reporters' current data against some parameter that defines "anticipated" or "reasonable" trends. Screening should show the analyst which data fall outside acceptable parameters and the relative position of these rejected data in terms of acceptable parameters. Thus screening both identifies and quantifies unacceptable data.

Screening reveals two types of rejected data -- those that can be explained due to some unusual (but known) occurrence and those data that cannot be explained.

Examples of unusual month-to-month movement that can be explained are: strikes, data with economic comment codes explaining unusual occurrences, and situations that an analyst knows are unusual but valid. These data should be used in making current-month estimates. Whether they are treated as atypical or normal is determined by the analyst.

Rejected data that cannot be explained have neither historical precedence nor information to justify unusual movements. Analysts should look at the magnitude by which rejected data failed to meet acceptable parameters. Again, data may be included in current estimates depending on the analyst's evaluation.

Any procedure used to screen microdata should make use of the historical activity of the data. Each data type must be screened with parameters determined by and for that particular data type. If the historical

activity of the data types of the actual establishment cannot be used to determine screening parameters, the next highest level of common economic activity is used. So that data will only have to pass through a system once to receive its initial screening, a "predicted" or "expected" value for the data type is constructed based on its historical experience. Around this predicted value several intervals may be constructed, representing levels of reasonableness; e.g., acceptable, noted, and rejected. The current month's value for each data type will be measured against the predicted value for each data type and will be located in one of these intervals. If data fall outside the acceptable range, both the data and the intervals are listed to provide the analyst with sufficient information to make decisions on whether and how to use the data.

Screening parameters can be used to evaluate individual reporter data, sample summary data, and/or movement of estimates. Parameters developed for evaluating sample summary or estimates should be set at a level of common economic activity. This level may be the basic estimating cell but should be no higher than the two-digit SIC level.

Parameters must be reviewed and updated periodically. Yearly reviews are recommended so that parameters will reflect recent trends. Screening parameters may be set for the entire year -- or they may be recomputed more often (even monthly) based on each additional monthly observation.

Some of the requirements for screening procedures for each data type are listed below.

Screening Algorithms:

- . Must take into account the historical activity of the cell where the reporter belongs.
- . Must take into account the variance of the sample members in the cell to which the reporter belongs.
- . Must take into account the variance of the specific data type.
- . Must compute an expected value for each data type for each reporter.
- . Must measure the current month's data against the calculated expected values to determine the reasonableness of the data.

6.6.4 Establishing Computerized Editing and Screening in a State

In order to most effectively use the edit and screening checks, a State must develop computer programs to make the edit check tests, list the edit errors, make the corrections or use data as is, screen the data for reasonableness, and produce the corrected reports to be used by the State as well as those to be transmitted to BLS-Washington.

All BLS 790 reports transmitted to BLS-Washington must include any corrections made as a result of a State's editing procedures (manual and computerized). All reports transmitted to BLS-Washington for the first time for a particular month must have a "5" (indicating an "original entry") entered in Column 80, even though they may have been "corrections" in the State system. Any changes to reports already transmitted to BLS-Washington must have a "6" entered in Column 80 indicating that they are corrections to reports sent previously for a particular month.

6.6.5 National Processing System Computerized Edit Checks

Data received by BLS are edited for validity. Edit listings are provided to the Regional Office for review. Specific data may be referred by the Regional Office to the State for correction or confirmation. Exhibit 6-D lists edit errors generated by BLS-Washington editing and describes corrective action to be taken.

6.7 TRANSMITTING BLS 790 SCHEDULE DATA TO BLS-WASHINGTON

6.7.1 Introduction

The microdata received by each State from the respondents on the BLS 790 schedules are transmitted to BLS-Washington by each State after the reports have been reviewed and edited. There are three closings (due dates) established by the National Office for each reference month. Each State should maximize the number of reports it transmits for each closing, giving special emphasis to first closings.

The data may be transmitted to BLS-Washington via a number of differing media. They include: telecommunication, magnetic tape, punched cards, and the BLS 790 schedules. In addition, the Schedule Substitute/Correction Form, SO-226 (see Appendix C), may be used to transmit original entries (used as a schedule substitute), or to transmit corrections or additions to reports previously submitted.

Each shipment of reports by mail must be accompanied by a Transmittal Sheet, SO-242 (see Appendix C). Also, at each closing time the States must inform the BLS Regional Offices of the number of reports for the current month that have (or will have) been transmitted to BLS-Washington for use in the current national closing. This information is given to BLS-Washington by the Regional Offices for use in the accounting of the sample received.

Subsequent subsections provide information on the required format for transmitting the microdata, the conditions for using each of the transmittal media, mailing procedures and addresses, requirements unique to each of the transmittal media, the use of the Schedule Substitute/Correction Forms, and the use of Flag Slips.

It is very important to follow the various requirements exactly in order to maximize the number of usable reports and data items received by BLS-Washington from each State for each closing, so that the best possible national estimates can be obtained.

6.7.2 Closing Dates and Related Information

The three closing dates (due dates) for a reference month are determined as follows. The reference week for each data month is the calendar week which includes the twelfth day of the month. First closings normally fall on the third Monday following the reference week. Second closings normally fall on the fifth Friday following the reference week. Third closings normally fall on the eighth Friday after the reference week. Variations from this schedule are usually made because of holidays or because of historically low sample coverage for a particular month and closing.

The closing dates for the current data year are shown in Appendix H.1. An updated version of this appendix, showing the closing dates for the upcoming year, is provided by the last quarter of each current calendar year.

First closings provide preliminary national estimates for major industries for publication in the Bureau's Monthly Employment Situation press release and in the Employment and Earnings publication. Second closings provide the first revision of the preliminary estimates and greater industry detail. Third closings provide the final (normally) revised estimates until the next revision of estimates to new benchmark levels.

First closing estimates for the current month are linked to the second closing estimates for the previous month. Second and third closing estimates for the current month are linked to the third closing estimates for the previous month.

Each State should transmit the maximum number of edited reports for each closing so that they reach BLS-Washington on (or before) the closing day. The processing of schedules, punched cards, and magnetic tapes in each State should be arranged so that the final shipment by mail for each closing is made on the last work day before the closing (or earlier if necessary), to reach BLS-Washington in time for processing.

All efforts should be made to transmit the maximum possible number of reports to BLS-Washington for first closings. This is especially important in regard to the national Key reporters (see Appendix D.5). The data from these reports are essential at first closing because of the large size of the reports and their representation of the industry.

Any national Key reporter data received after a month's third closing should be transmitted to BLS-Washington as quickly as possible. Other reports received after a month's third closing should be transmitted with the next regular shipment of data. Prompt transmittal of data received after third closings provides data to match against the following month, and helps to maintain comprehensive national historical files of the microdata for future use in benchmark revisions, SIC revisions, etc.

6.7.3 Transmittal Sheets and Sample Accounting

Every shipment of BLS 790 microdata must be accompanied by a properly complete Transmittal Sheet, SO-242 (see Appendix C). This applies to all shipments of magnetic tapes, punched cards, schedules, and schedule substitute and correction forms, whether the shipments are large or small. It is very important that each shipment of reports be accompanied by an accurately completed Transmittal Sheet. For proper accounting, transmittal sheets must also be completed for telecommunicated data.

Each State must enter the date of transmittal, the State name, the transmittal (closing) number (start with 1 for each reference month), the name of the sender, and an indication of how the shipment was sent (Express Mail, Registered Mail, etc.). The following must also be entered: the number of schedules sent, the number of reports sent on schedule substitute and corrections forms, the number of punched cards sent, the number of reports sent on each magnetic tape, and the number of reports telecommunicated. In each case, the counts must be broken out by month and the month and year of the data entered in the proper columns.

The Transmittal Sheets are filed at BLS-Washington as they are received, by State, and within each State by the date of receipt. The information on the Transmittal Sheets is a major component of the national sample accounting performed for each closing.

Call your BLS Regional Office at each closing time and provide the number of reports transmitted to BLS-Washington for the current closing. The information is provided to BLS-Washington and is used to verify that the entire State transmittal has been received and processed. This call is especially important if you telecommunicate data, in case a telecommunicated data file has not been received.

These counts should be comparable to those submitted on a State's Transmittal Sheet(s) for a closing. The basic figure desired is the number of reports transmitted for the current closing since the last closing for the month involved.

It is important that the information provided on the Transmittal Sheet be accurate and provided on time. All reports for the current closing should be counted, including reports sent early and reports sent at the last minute. The transmittal of duplicates should be avoided and they should never be included in the counts even when they are sent.

In addition to the basic counts, counts should be given of the number of reports which need to be keypunched at BLS-Washington. In the event that a State encounters a problem that will prevent it from transmitting a normal number of reports for a closing, it should notify its BLS Regional Office as soon as possible so that alternatives can be considered.

The third major component of the national sample accounting consists of computer-generated totals of the number of reports entered into the national system for each State for the current closing and for noncurrent months. These computer listings are produced by BLS-Washington and are sent to the Regional Offices as a record of the data received and processed for each closing during the month.

The three types of report counts discussed above for the current month/closing are compared and should be identical (or nearly so). The number of reports received for a closing and entered into the system normally equals the increase in the number of reports received since the previous closing for the month involved, after duplicate reports and reports not matching the registry are subtracted out. This information is shown on the "State/Region Totals Report", which is distributed to the BLS Regional Offices each month by BLS-Washington. States should contact their Regional Office to receive copies.

6.7.4 Acceptable Data Transmittal Media

A. Schedules

Schedules are an acceptable transmittal medium. However, only current data are keypunched from the schedules sent to BLS-Washington. Data for any prior months must be submitted in machine-readable form or on schedule substitutes. Whenever possible, a State should either telecommunicate the bulk of its BLS 790 microdata or transmit it on magnetic tapes.

1. After schedules for the current month have been edited and the data have been entered on office records, send them via registered mail to BLS-Washington (see the appropriate address in Exhibit 6-C).
2. Group the various types of schedules (BLS 790 A,B,C, etc.) by type in order to facilitate correct keypunching.

3. Do not hold until the mailing deadline; ship them whenever a reasonable number have been received, edited, and transcribed.
 4. Ship the final shipment of schedules prior to a closing via express mail programmed service to ensure that the shipment reaches BLS-Washington two (2) workdays before the closing date; otherwise use registered mail.
 5. Each shipment of schedules must be accompanied by a properly completed Transmittal Sheet, SO-242.
 6. Wrap shipments of schedules in heavy protective wrapping paper and seal with gummed tape, not cord, since cord may cut through the wrapping paper and damage the schedules.
 7. After the data for the current month on a schedule have been keypunched at BLS-Washington, a red check is placed in the left margin of the schedule next to the month involved and the schedules are returned to the State.
 8. A State may send photocopies of schedules or office record cards with its final shipment of reports when data are received at the last minute and the time before the mailing deadline is insufficient to allow for keypunching, etc.
- B. Machine-readable Media (Telecommunication, Magnetic Tapes, or Punched Cards)

1. General

States currently using schedules to transmit the bulk of their BLS 790 microdata are urged to make the necessary arrangements for transmitting data in machine-readable form. Telecommunication is the preferred method of transmission, followed by magnetic tapes, and then punched cards.

The specifications for uniformity of format, content, and transmittal given are quite rigid. Exceptions to these requirements adversely affect the standardized processing of large amounts of data. Therefore, no exceptions to these requirements are allowed.

- a. The unit in a State which is responsible for the CES (790) Survey must have sufficient access to the State's machine services to insure adherence to BLS-Washington's deadlines.
- b. When switching from one transmittal medium to another, a trial period of at least three (3) closings is required (longer if

necessary) during which a State must send dual data transmissions to BLS-Washington. This is done in order to insure that the new Procedures and requirements are being followed satisfactorily.

- c. When a State is able to start submitting BLS 790 microdata in machine-readable form, it should inform its BLS Regional Office in a memorandum. This memorandum should include a request for thirty tapes, or a supply of punched cards, or a request for testing telecommunication, and the name and mailing address of the person to whom BLS-Washington should send the materials.
 - d. After receiving the materials, a State should begin the dual transmission of microdata. BLS-Washington will notify a State via its Regional Office when it has successfully submitted the data correctly using the new method; the State may then cease dual transmissions. After receipt of the eleventh tape from a State, magnetic tapes will automatically be replaced by BLS-Washington. Thus the State will always have at least twenty tapes on hand.
 - e. Punched cards, magnetic tapes, or telecommunication procedures may be used to transmit data for current and for noncurrent months. "Original entries" and "corrections/additions" may be sent. The proper "record (card) number" must be entered in Column 80; i.e., a "5" for "original entries" and a "6" for "corrections/additions".
 - f. If a State keypunches reports prior to review and produces listings which are used to edit the data, incorporate all changes to the reported data resulting from this editing process into the machine-readable data transmitted to BLS-Washington on punched cards, magnetic tapes, or via telecommunication.
 - g. If data for a data field are missing (not available), enter a "-" (hyphen) in the first position of the field and leave the remaining positions in the field blank. The "-" (hyphen) used in machine-readable data is equivalent to the "X" that is manually entered on a BLS 790 schedule when data are not available for a data item.
2. The Format of Machine-Readable BLS 790 Microdata Transmitted to BLS-Washington

The record format to be used for transmitting BLS 790 data in machine-readable form to BLS-Washington is shown in Exhibit 6-B. This format is used whether the State is telecommunicating data or sending data on magnetic tapes or punched cards.

3. Punched Cards

- a. Mail punched cards in no more than two (2) shipments (preferably only one) per closing. Time the mailings(s) to include the maximum number of reports for each closing. Ideally, the (final) mailing is done on the workday preceding the closing day.
- b. The package of punched cards must be sent to BLS-Washington via express mail programmed service unless a State is directed otherwise by its BLS Regional Office (see the appropriate address in Exhibit 6-C).
- c. Each shipment of punched cards must be accompanied by a properly completed Transmittal Sheet, SO-242. Data for both the current and noncurrent months may be transmitted under the same Transmittal Sheet. A separate card count for each month must be entered on the Transmittal Sheet. However, it is not necessary to separate the cards by month or into manufacturing and nonmanufacturing groups.
- d. Tightly pack punched cards into the 2,000-card containers in which they were received; the containers may be cut down to fit if necessary. Wrap each container in heavy protective wrapping paper and seal with gummed tape, not cord, since cord may cut through the containers and damage the cards.

4. Magnetic Tapes

- a. Normally, only one (1) reel of tape is sent to BLS-Washington for each closing; it may contain data for both current and noncurrent months. Each tape shipment must be accompanied by a properly completed Transmittal Sheet, SO-242. A separate record count for each month must be entered on the Transmittal Sheet.
- b. An external label with the format below must be affixed to each reel of tape:

DSN: BLS 790.aabb.xxxy
9-Track Tape - 1600 bpi
Total No. of Records on Tape: _____

Where: aa = alphabetic State code (FIPS)
bb = numeric State code (FIPS)
xxx = reference data month (JAN,FEB,...DEC)
y = closing number (1,2,3,...)

- c. Internal labelling of magnetic tapes is described in Exhibit 6-B.

- d. Time the mailing of magnetic tapes so that the maximum possible number of reports are included for each closing. Ideally, the mailing takes place on the workday before the national closing day.
 - e. Place a tape in the cardboard container in which it was received. Extra containers may be obtained upon written request. The container must be shipped to BLS-Washington via express mail programmed service (see the appropriate address in Exhibit 6-C).
 - f. Full magnetic tape specifications are described in Exhibit 6-B.
5. Telecommunication of Data

- a. Telecommunication of Reports in Batch Mode for BLS 790 Closings via RJE Terminals

Telecommunication of data is considered preferable to the other transmittal media; it is recommended that a State transmit the bulk of its reports via telecommunication whenever possible. Specific procedures for telecommunicating data are described in Appendix I.1.

To enable BLS-Washington to successfully use data submitted via telecommunication in the production of the national estimates, rigid specifications for the uniformity of content and transmittal must be met.

A State must have either a dial-up remote job entry (RJE) terminal which is IBM compatible or be able to transmit data directly from one central processing unit (CPU) to another.

The State should advise the BLS Regional Office of its plans to switch to telecommunicating data. The Regional Office will notify BLS-Washington to arrange for the testing. For first closings, each State must transmit all available data on the Friday immediately preceding the Monday closing (unless there is some rescheduling due to holidays, etc.), and can send any additional data on the day of the closing (usually Monday). For second and third closings, only one transmission will be necessary. This should take place on the day of the closing (usually Friday). All transmissions must be completed on the scheduled day by 4:00 p.m. (Eastern Time). If unavoidable problems prevent data transmission at the prescribed times, the computer center will accept transmission 24 hours a day, seven days a week. However, late transmission will not ensure that data will be processed in time for a scheduled closing. Upon completion of transmission the system has capabilities to list for the State the data records sent as confirmation of successful transmission.

b. On-Line Keyboard Data Entry System

This transmittal procedure is used to transmit data received by a State after its final major transmittal of BLS 790 microdata to BLS-Washington before each closing. It can be used in place of transcribing last-minute data on Schedule Substitute and Correction Forms (SO-226) for transmission to BLS-Washington.

If a State has a data entry terminal and wants to use this procedure, it should contact its BLS Regional Office which will in turn contact BLS-Washington in order to obtain the BLS 790 account number, a unique user-ID code, and password for the State. See Appendix I.2 for detailed instructions.

This procedure is costly because it is "on-line", as opposed to the remote "batch-entry" procedure of telecommunicating large numbers of reports. For this reason, only small numbers of last-minute especially significant (Key) reporters should be transmitted in this manner.

6.7.5 BLS-Washington Mailing Addresses

Transmit to BLS-Washington the maximum number of edited reports for each closing. Arrange the processing of schedules, punched cards, and magnetic tapes so that the final shipment for each closing can be made on the workday immediately preceding each closing (earlier if necessary in order to reach BLS-Washington in time for the scheduled national closing). See Exhibit 6-C for the BLS-Washington mailing addresses.

6.7.6 Corrections and Additions to Data

A. The Schedule Substitute and Correction Form (SO-226)

1. The Schedule Substitute and Correction Form, SO-226, is a multipurpose form designed to be used as follows:
 - . to transmit original BLS 790 microdata (initial input) in place of the normal method
 - . to transmit corrections to previously-submitted microdata in place of the normal method
 - . to transmit additional data items for a report that were not available when submitted initially; e.g., submitting payroll and hours data which have become available in addition to the employment data items submitted earlier.

2. The SO-226 form is designed so that the microdata for several months and/or for several reporters may be entered on one form. However, do not delay the transmittal of an SO-226 form to BLS-Washington merely because some of the lines on the form have not been completed.
3. Send SO-226 forms to BLS-Washington for keypunching (see appropriate address in Exhibit 6-C).
4. SO-226 forms must be accompanied by a properly-completed Transmittal Sheet, SO-242.
5. SO-226 forms or machine-readable media (punched cards, magnetic tapes, telecommunication) must be used in place of BLS 790 schedules to transmit back months' data to BLS-Washington, as back data are never keypunched from schedules sent to BLS-Washington.
6. SO-226 forms may be used to transmit current data when this is desirable.
7. Revised (corrected) BLS 790 schedules must not be transmitted to BLS-Washington; instead, use the SO-226 form to transmit revised (corrected) data.
8. SO-226 forms may be used in place of the machine-readable media when this is desirable. This applies particularly to recently-received late reports, important reports received at the last minute and missing a machine cutoff, or other small groups of reports requiring special handling.

B. Using the SO-226 form as a Schedule Substitute

SO-226 forms may be used as schedule substitutes to transmit original data (initial input) in place of the medium normally used, when small amounts of data are to be transmitted.

1. All data entries must be numeric, except the entry for the Transaction Code in Column 13, which must be alphabetic.
2. Columns 1 - 10Y and 12 - 14 must contain entries.

Col.

1 = Month
2 = Year
3 = State
4 = Report Number
5 = SIC Code
6 = All Employees
7 = Women Workers

Col.

8 = Production Workers
9 = Payroll
10 = Hours
10Y = Overtime Hours
12 = L/P Code
13 = Transaction Code
14 = Record (Card) Number

3. If payroll and hours must be reduced to a one-week basis manually, an "X" must be entered in Column 12 (L/P Code). However, if they are not reduced manually, an appropriate two-digit L/P code must be entered in Column 12. Enter an "X" in Column 12 if the payroll and hours are already on a one-week basis.
 4. Each column (except Column 11) must contain an entry. Enter zero (0) in any column from 6-10Y which has data properly reported as zero (0). Enter an "X" in any of these columns for which a data item is not available. Reports in nonmanufacturing industries must have an "X" entered in Column 10Y (Overtime Hours).
 5. If an Explanation Code is not available, leave Column 11 blank. If an Explanation Code is available, enter the two-digit code, using a zero (0) for the first digit when necessary.
 6. Enter the letter "S" in Column 13 (Transaction Code) and the numeral "5" in Column 14 (Record [Card] Number). These codes denote a report as an "original entry" (initial input) of data.
 7. Place a green check in the left margin of the BLS 790 schedule by the month in question to indicate that it has been transcribed to an SO-226 form as an "original entry". This procedure will help the State in identifying BLS-Washington keypunch errors.
- C. Using the SO-226 Form as a Correction/Addition Form

In addition to its use as a schedule substitute for the initial input of data, the SO-226 form may be used as follows:

- . to transmit corrections to previously-reported data instead of using one of the machine-readable media;
 - . to transmit, for a previously-submitted report, additional data items which were not available for the initial input of data.
1. All data entered must be numeric, except the entry for the Transaction Code in Column 13, which must be alphabetic.
 2. Columns 1-5 must be numeric:
 - . Col. 1 = Month
 - . Col. 2 = Year
 - . Col. 3 = State Code (numeric)
 - . Col. 4 = Report Number
 - . Col. 5 = SIC code

3. Enter only the item(s) being corrected or added in the data fields (Columns 6-10Y), except that whenever either payrolls or hours are being corrected, then both fields must contain the appropriate entries.
4. If only employment (AE) is being corrected, then only the following columns should contain entries:

. Col. 1 = Month	. Col. 3 = State Code (numeric)
. Col. 2 = Year	. Col. 4 = Report Number
	. Col. 6 = All Employees
5. An "X" must be entered in Column 12 (L/P Code). If payroll, hours, or overtime hours are being added or corrected, they must be reduced to a one-week basis manually.
6. Enter the letter, "C" in Column 13 (Transaction Code) and the numeral, "6", in column 14 (Record [Card] Number). These codes denote a report as a "correction" or "addition" entry.

D. Submitting Corrections and Additions in Machine-Readable Format

Corrections to CES microdata can be submitted in machine-readable form along with the transmittal of new data records. The format for machine-readable data is described in Exhibit 6-A. Note that data corrections must contain a "C" in position 79 and a "6" in position 80 to be correctly identified and processed as corrections by the computer system.

6.7.7 Flag Slips

When a State has not satisfactorily explained unusual changes in the data of a BLS 790 report, BLS-Washington may send a Flag Slip, SO-226 (see Appendix C), to the State requesting verification, correction, or a satisfactory explanation of the questionable data. A Flag Slip may also be sent to a State to request verification or correction of questionable identification codes or to request data urgently needed for a national closing.

Enter an appropriate explanation or correction, or provide the requested data, and return the form to BLS-Washington immediately (see appropriate address in Exhibit 6-C).

A State may use Flag Slips to obtain verification or correction of data supplied by BLS-Washington for National Reporters (see Section 6.5.5).

EXHIBIT 6-A

MACHINE-READABLE FORMAT FOR CURRENT EMPLOYMENT STATISTICS (BLS 790) MICRODATA

DATA ITEM	POSITIONS	FIELD SIZE	DATA ENTRY INSTRUCTIONS
Month	1-2	2	Numeric; 01-12
Year	3-4	2	Numeric; last 2 digits of year
State Code (FIPS)	5-6	2	Numeric; 01-56. See FIPS State Codes, Appendix E.1.
Report Number	7-11	5	Numeric; right-justify and zero-fill.
SIC (industry)	12-15	4	Numeric; 4-digit Standard Industrial Classification code, except for synthetic codes established by BLS, and exemptions to 4-digit coding listed in Section 2.
All Employees (both sexes)	16-21	6	Numeric; right-justify; leading zeros optional. If data equal zero, report "0", right-justified. If data <u>not reported</u> , enter a hyphen (-) in far left position of field and leave remaining positions blank.
Women Workers	22-26	5	
Production Workers ^{1/}	27-31	5	
Total Payroll	32-39	8	
Total hours	40-46	7	
Overtime Hours	47-53	7	
Blanks	54-60	7	Leave blank.
Explanation (Comment) Code	61-62	2	2-digit numeric comment code if applicable (see Appendix F.2); otherwise, leave blank.
L/P Code	63-64	2	2-digit numeric code if applicable (see Section 6.3.6 for L/P code assignments); otherwise enter two hyphens (--) to indicate that report is on a 1-week basis.
Blanks	65-75	11	Leave blank.
Classification Code	76-77	2	Leave blank; reserved for BLS-Washington use.
Blank	78	1	Leave blank.
Transaction Code	79	1	Alpha entry: "S"= Original entry of report; "C"= Correction entry to report.
Record Number	80	1	Numeric entry: "5"= Original entry of report; "6"= Correction entry to report.

^{1/} Includes production workers in manufacturing industries, construction workers in construction industries, and nonsupervisory workers in other non-manufacturing industries.

EXHIBIT 6-B

MAGNETIC TAPE SPECIFICATIONS -- BLS 790 MICRODATA TRANSMITTAL

At the request of a State, magnetic tapes are supplied by BLS from a pool of shuttle tapes. These tapes are made available for BLS 790 data transmittal. The following tape specifications are required when writing on these tapes.

Tape Characteristics:

- . 9-Tracks . 1600 b.p.i. (bits per inch)
- . Extended Binary Coded Decimal Interchange Code (EBCDIC)

Blocking factor and sequence:

- . Blocking factor: 10 Sequence: random
- . Logical record length: 80

External label:

An external label with the format below must be affixed to each reel of tape:

DSN: BLS 790.aabb.xxyy
9-TRACK TAPE -- 1600 bpi
Total No. of Records on Tape: _____

WHERE aa = Alphabetic FIPS State Code
bb = Numeric FIPS State Code
xxx = Reference data month (JAN, FEB, ... DEC)
y = Closing Number (1, 2, or 3)

Internal labels:

Header Label: standard IBM OS header labels
Trailer Label: standard IBM OS trailer labels

Short Length Block:

A magnetic tape file that does not have a multiple of ten (10) records must not be padded in the last block. Therefore, the last block of a file may consist of one to ten logical records and should not be padded to fill out the block.

Data Set Naming Conventions:

Use the following method in naming data sets:

- . DSN = BLS790.aabb.xxyy
- . aa = alphabetic FIPS State abbreviation
- . bb = numeric FIPS State code
- . xxx = reference data month*
- . y = closing designation (1,2, or 3)

*Acceptable month designations are:

JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC

Internal labels. Each reel will have five internal labels, according to the standard IBM OS format: a volume header label, a file header label 1, a file header label 2, and end-of-file label 1, and an end-of-file label 2. Do not write over the BLS-generated volume header label, which contains the BLS-assigned magnetic tape number.

Volume header label. The standard volume header label (VOLI) is 80 characters in length and is used to identify the tape volume and its owner. It should be the first record on a standard-labeled tape and should conform to the following format:

<u>Positions (length)</u>	<u>Item</u>	<u>Content</u>
1 - 4 (4)	Label ID and label number	Must be VOL1. This field is read to verify that a standard-labeled tape is mounted, and that this label is a volume label.
5 - 10 (6)	Volume serial number	Six alphanumeric characters as assigned by the State. The assigned volume serial number should match the external number assigned by BLS.
11 - 41 (31)		Must be blank.
42 - 51 (10)	Owner name and address code	This code will be: IBM--S.360
52 - 80 (29)		Must be blank.

* Optional fields, which may be recorded as blanks.

Data set label 1. The standard data set label 1 is used for header labels (HDR1), end-of-volume trailer labels (EOV1) and end-of-data-set trailer labels (EOF1). Data set label 1 is always followed by data set label 2. The contents of each field of the standard label 1 format are described below.

<u>Positions (length)</u>	<u>Item</u>	<u>Content</u>
1 - 4 (4)	Label identifier and number EOV1	HDR1 for header label; for trailer label; EOF1 for trailer label at the end of a data set.
5 - 21 (17)	Data set identifier	The leftmost six positions, 5-10, must contain the identifier, BLS790: the remaining eleven positions are blank.
22 - 27 (6)	Data set serial number	The volume serial number of the tape containing the data set: EEaann (see Volume header label).
28 - 31 (4)	Volume sequence number	Must be 0001 for a single volume set.
32 - 35 (4)	Data set sequence number	Must be 0001 for a single data set.
36 - 39 (4)	Generation number	Must be 0001 for the first generation of a generation data group.
40 - 41 (2)	Version number	Must be 00 on the first version.
42 - 47 (6)	Creation date	The data are in the format: byydd. Position 42 must be blank (b); positions 43-44 must contain the last 2 digits of the year in which the tape was created (yy), positions 45-47 must contain the day within the year, from 001-336 (ddd).

<u>Positions (length)</u>	<u>Item</u>	<u>Content</u>
48 - 53 (6)	Expiration date	The data are in the same format as above to indicate any date later than 6 months after the due date for the report when the data set may be scratched or written over.
54 (1)	Data set security	Must be blank.
55 - 60 (6)	Block count	This field in the header label is always 000000; in the trailer label, this field contains the number of blocks of data on the tape, right justified and zero-filled.
61 - 73 (13)	System code	Must be zero-filled.
74 - 80 (7)		Must be blank.

* Optional fields, which may be recorded as blanks.

Data set label 2. The standard data set label 2 is an 80-position record that is used following data set label 1 as a second header label (HDR2), an end-of-volume trailer label (EOV2), and as an end-of-data-set trailer label (EOF2).

Data set label 2 always follows data set label 1. The contents of each field of the standard label 2 format are described below.

<u>Positions (length)</u>	<u>Item</u>	<u>Content</u>
1 - 4 (4)	Label identifier and number	HDR2 for header label; EOVS for trailer label; EOF2 for trailer label at end of data set.
5 (1)	Record format	F, to indicate the format of the data records as Fixed length.
6 - 10 (5)	Block length	"00800" for BLS790 data files.
11 - 15 (5)	Record length	"00080" to indicate logical record length of BLS790 records.
16 (1)	Tape density	Not used - record as blanks.
17 (1)	Data set position	Not used - record as blanks.
18 - 34 (17)	Job/job step identification	Not used - record as blanks.
35 - 36 (2)	Tape recording technique	Record this field as blanks for 9-track tape.
37 (1)	Control characters	Not used - record as blanks
38 (1)	Reserved	Not used - record as blanks
39 (1)	Block attribute	Use code "B" to indicate blocked records.
40 - 80 (41)	Reserved	Not used - record as blanks.

* Optional fields, which may be recorded as blanks.

EXHIBIT 6-C

BLS-WASHINGTON MAILING ADDRESSES

Schedules, punched cards, magnetic tapes, and Schedule Substitute and Correction Forms sent by the States to BLS-Washington must be sent to the following address:

Bureau of Labor Statistics
Automatic Data Processing Support Staff
BLS 790, Code 52
441 G St., N.W.
Washington, D.C. 20212

Replies to Flag Slips sent to the States by BLS-Washington must be sent to the following address:

Bureau of Labor Statistics
Division of Monthly Industry Employment Statistics
BLS 790, Room 2074
441 G St., N.W.
Washington, D.C. 20212

CES MICRODATA EDIT CHECKS

EXHIBIT 6-D

ERROR CODE	EXPLANATION OF THE ERROR	ACTION TO BE TAKEN
'0' under report number	The report ID does not match the registry (rept. ID = State code and rept. #).	Resubmit with proper report ID or add new reporter to Registry. (Submit data as initial input, code "5" in record position 80.)
'01' under SIC code	The SIC code does not match the registry. (BLS-Washington retains nonmatched records on a separate file and attempts to reprocess for the next three 3rd closings, in case the Registry has been updated.)	Resubmit with proper SIC or correct the registry. (Submit data as initial input, code "5" in record position 80.)
'01' under the report number	The reporter has been cancelled. If data are received and program status is "0", it is treated as a non-match.	If the reporter should be reinstated, submit an SO-229 form as a program status change to '1' with action code '2'.
'02' in the column entitled 'TRANS'	The report is a duplicate and is rejected. Reports with duplicate identification codes but differing data fields are both listed for review. (Exact duplicates -- all data fields are identical -- are not listed; the initial record is retained in the data base and subsequent records are rejected.	Review both records. If the 1st line is correct, no action is needed. If the 2nd or subsequent lines of data are correct, prepare a correction and enter "C6" in record positions 79-80.
'02' under the month and year	The date is older than four months from the month being processed.	Verify whether date is correct. If the date is correct, no further action is necessary; otherwise, submit a correction, with "C6" in positions 79-80.
'03' under data field	The field is blank or contains nonnumeric data and is rejected.	Submit corrections only, and indicate changes by entering 'C6' in columns 79-80.
'03' under State, report #, SIC	The field will be zero filled on the listing.	No action is necessary now. Be sure future reports have no blanks or non-numeric data in these fields.

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'03' under L/P code	L/P code is blank. It is flagged and recoded to '--'.	If reported data are for a 1-week period, no action is necessary. If L/P code should have a value other than "--", submit correction.
'03' under the month and year	The date of the report is for a more recent period than the month and year being processed.	Resubmit as initial input with the corrected month and year and code '5' in record position 80.
'04' under the production workers field	The number of production workers reported exceeds the all employee figure.	Submit only the corrected production workers and enter 'C6' in record positions 79-80. (Check AE for possible errors.)
'05' under the women workers field	The number of women workers exceeds the all employees figure.	Submit only corrected women workers and enter 'C6' in record positions 79-80. (Check AE for possible errors.)
'05' under the month and year	The data are more than 16 months old, and the entire report is rejected.	Verify that the month and year are correct. The system will not accept data older than 16 months.
'06' under the overtime worker-hour field	Overtime reported in an SIC that is less than 2000 or greater than 3999 is rejected.	For future transmittals, do not submit overtime data for an SIC which is less than 2000 or greater than 3999. No action necessary for the current report.
'07' under the worker-hours and overtime hours fields	The overtime hours are greater than reported worker-hours; both fields are rejected.	Submit only the corrected worker-hours, overtime worker-hours (if used), and enter a 'C6' in positions 79-80.
'08' under the production workers, payroll, worker-hours and L/P code fields	The payroll and worker-hours are properly reported, but the production workers are not reported. All three fields are rejected. (Does not apply to State and Local Government reports).	Submit the correct production workers, payroll, worker-hours, overtime hours and L/P code (if applicable) and enter a 'C6' in positions 79-80.

'09' under the payroll and worker-hour fields	The production workers are reported as zero, and the payroll and/or worker-hours are not zero. The payroll and worker-hours are rejected.	Submit only the correct production workers, payroll, worker-hours, and L/P code (if used) and enter a 'C6' in positions 79-80.
'11' under the payroll and worker-hour fields	The payroll divided by the worker-hours is less than 0.99 or greater than 40.01. Both fields are rejected.	Submit only the corrected payroll, worker-hours, and L/P code (if used), and enter a 'C6' in positions 79-80.
'12' under the L/P code field	The L/P code is either non-numeric or less than 0.19 or greater than 0.66. The payroll and worker-hours are rejected.	Submit only the payroll, worker-hours, overtime worker-hours, and corrected L/P code (if applicable) and enter a 'C6' in positions 79-80.
'15' under the worker-hour field	The worker-hours are reported as zero, but the overtime worker-hours are greater than zero. The payroll, worker-hours and overtime worker-hours are rejected, and worker-hours will appear as a '-1' on the report instead of a '0.'	Submit only the corrected worker-hours, overtime worker-hours and LP code (if used) and enter a 'C6' in positions 79-80.
'16' under the worker-hour field	The worker-hours divided by the production workers are greater than 75.	Submit corrected worker-hours and/or production workers and enter a 'C6' in record positions 79-80.

- NOTE:**
- . Initial input data must contain a code "5" in record position 80 for purposes of standardized processing.
 - . Corrections to previously submitted data must contain a code "C" in record position 79 and a code "6" in record position 80 for purposes of standardized processing.
 - . The "W" beneath the heading KPCH on the error listing identifies reports keypunched in BLS-Washington. Please compare the information on the listing to the original document and submit corrections for errors due to transcription or reporting errors. Bring legitimate keypunch errors to the attention of the Regional Office, which will advise BLS-Washington.

Section 7: CES STATE AND AREA ESTIMATES -- PROCESSING AND TRANSMITTAL

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Section 7: CES STATE AND AREA ESTIMATES - PROCESSING AND TRANSMITTAL**7.1 INTRODUCTION****7.1.1 Purpose**

State and area employment, hours, and earnings estimates (macrodata) are prepared monthly and revised annually to new benchmark levels by the State agencies in cooperation with the Bureau of Labor Statistics (BLS). These estimates are based primarily on the same establishment reports (microdata) which are used by BLS-Washington in the preparation of national estimates.

This section describes the estimates to be prepared by the State, the minimum edit and screening checks to be performed, the reporting formats to be used, and the times and methods of data transmittal to BLS.

7.1.2 Processing Flow

Monthly reports of State and area employment and hours and earnings estimates are prepared by the State for as many industries or industry groups as can be supported by the available sample data. At a minimum, all series which are published by the State are to be included in these reports, which are then transmitted to BLS-Washington or the appropriate Regional Office. Transmit these reports following the time schedule noted in Section 7.4 and Appendix H.2.

These employment, hours, and earnings estimates are generated according to estimating procedures which are described in Sections 2-5 of this manual. Once prepared, these estimates must be edited for completeness and accuracy, and then reviewed for reasonableness prior to transmittal. The BLS edit and screening criteria, which are described in Section 7.3.4, are the minimum criteria to be used by the State in its review of the data. States must submit comments to explain any estimates which do not meet the minimum screening tolerances. Section 7.3.5 provides more detailed information on the use of comment codes to explain apparent data discrepancies.

Also, on an annual cycle, the final monthly estimates are adjusted to the latest benchmark month, the benchmark month usually being the latest March for which ES-202 data are available. Annual averages are developed based on the revised data, and all of the data (annual averages and benchmark data) are transmitted to BLS-Washington. These annual estimates must meet the same minimum edit and screening criteria as do the monthly data.

States must transmit estimates on punched cards, magnetic tapes, or via telecommunication to BLS according to the record formats in Exhibit 7.B and the transmittal instructions in Appendix I.1, Section D.

7.2 IDENTIFYING AND CONTROL INFORMATION

7.2.1 Introduction

State and area data are identified and controlled by a set of numeric codes. These codes designate the industry group, the State, the area, the data type, and the record layout which are being reported. A detailed discussion of these codes follows.

7.2.2 Series Codes

A. Structure

Standard series codes must be assigned to each estimate of employment, hours, or earnings, which is reported. The series code is a unique identifier of an industry classification or a combination of industries. A list of valid series codes is included in Appendix E.2.

The series codes are based on the 1972 Standard Industrial Classification Manual, and are 6-digit figures. The first digit represents a specific industry division; the next four positions identify an industry or combination of industries; the last position identifies an ownership affiliation or a combination of ownerships. Appendix E.2, Master List of Series Codes contains the industry divisions, ownership affiliation status, and the series codes which are valid at present.

B. Reporting a Series for the First Time

If a State intends to report a series which it previously has not reported, but for which a code currently exists on the "Master" list, the procedure detailed below is to be followed.

Notify the Regional Office, specifying the new series to be started for particular States or areas. (Note: These are series for which a code currently exists on the "Master" list.) When notifying the Regional Office provide the following information:

- . Start year (first year for which data will be available)
- . benchmark year
- . publishability status (publishable or unpublishable)
- . datatypes to be submitted (e.g., AE, WW, PW, AWE, AWH, AHE AWOH)

All series to be published by the State must first be validated by the Regional Office.

Submit data for as many historical years as possible. Historical data will be used to develop estimate links if at least four years of data are available. Estimate links are used in screening both monthly and annual data to ensure reasonableness and consistency in the data. Series for which historical data are unavailable must receive special handling and be forced onto the data base. Therefore, for starting a new series:

- . Prepare estimates for a new series for at least 12 months.
- . Obtain validation from the Regional Office if new series are to be published.
- . Submit the 12 months or more of estimates on annual forms or in machine-readable format.
- . Start submitting the monthly estimates for the newly validated series.

This method of starting a series is the only acceptable method as it provides the most complete information to BLS and to other users of State and area data.

C. New Series Codes

New series codes will be created by BLS-Washington on written request. A State that wishes to begin preparing estimates for industry and ownership combinations which currently are not defined by a series code on the "Master" list must request, through the Regional Office, that BLS-Washington create a new series code. Exhibit 7-C has a reporting format. Send the completed information to BLS-Washington via the Regional Office. The form requests the following information:

- . SIC composition of the new series,
- . A suggested title,
- . The data types to be reported, and
- . Reasons for the request.

Also include the States and areas which will be using the new code.

Series codes must be entered properly onto all State and area data records; BLS cannot publish data having incorrect series codes. If a series code does not exist on the "Master" list of series codes, a formal request must be made by the State to have the series code created and added to the State and area data base; otherwise, the series will be rejected. New series codes may be requested for both published and unpublished data.

7.2.3 State and Area Codes

Each estimate must have a geographic identification to be usable. The identifier is a six-digit numeric code. Federal Information Processing System (FIPS) codes are used for this purpose. These numeric codes (2 digits for State identifications and 4 digits for area identifications) are listed in Appendix E.1. Some of the State/area codes have been developed especially for CES use, and differ from area definitions used by other agencies; therefore, be sure to check Appendix E.1 when assigning a State/area code.

7.2.4 Card Codes

Card codes are entered in a record to distinguish the record layout of the data being transmitted. These codes are included on all CES State and area printed forms, and must be entered in the appropriate column position in all transmitted data.

The card codes control the edit and screening through which the data are processed, the format in which the data will be accepted and printed in the facsimile report and, in conjunction with the other control information, they control the data fields on the data base which are to be updated. The correct use of these card codes is critical to the proper functioning of the system. See Exhibit 7-B for details concerning the appropriate codes and the position of the codes in the record layouts.

7.3 STATE PROCEDURES

7.3.1 Monthly Estimates

State and area estimates are reported monthly to BLS. For each industry series that is reported, seven data types may be estimated: All Employees, Production Workers, Women Workers, and (for production workers) Average Weekly Earnings, Average Weekly Hours, Average Hourly Earnings, and Average Weekly Overtime Hours. For each data series, two estimates are to be reported:

- . preliminary estimates for the current month, and
- . final estimates for the previous month.

Estimates for both time periods must be on the same benchmark.

Edit these estimates for completeness and valid coding prior to transmittal. They should also be screened for reasonable relationships among data items according to the minimum editing and screening criteria described in Section 7.3.4. Provide comments for those estimates which require explanation, as described in Section 7.3.5.

Transmit monthly estimates in time to be received in BLS by the monthly closing dates which are listed in Appendix H.2. A new schedule of closing dates is provided each year by BLS-Washington in the CES Technical Memorandum "S" series.

The transmittal medium for monthly estimates and comments may be reporting forms (SO-235, SO-235C, if sent to the Regional Office for processing and subsequent data transmission to BLS-Washington), or a machine-readable medium:

- punched cards,
- magnetic tape, or
- telecommunication

Section 7.5 describes these options for transmitting data to BLS-Washington.

7.3.2 Annual Average Estimates

At the end of each calendar year, after the monthly estimates for December have been prepared, all series which were reported during the year must be adjusted to new benchmark levels using the latest March ES-202 data. After this adjustment is made, the revised estimates are validated by the Regional Office and then transmitted to BLS-Washington by the due date shown in Appendix H.2: Closing Dates.

These revised estimates, with calculated annual average estimates, will replace the final monthly estimates which were reported during the year on the monthly reporting forms.

Editing and screening checks should be performed before these estimates are transmitted (per criteria described in Section 7.3.4).

If a series or a particular data type for a series is not being adjusted due to the benchmark revision, a written statement from the Regional Office validating the existing estimates is required. For example, if the hours and earnings estimates are not to be revised with the new benchmark, validation of the hours and earnings estimates currently on file, as well as of the annual averages, is needed for the data to be publishable.

The transmittal options for annual average estimates are described in Section 7.5. The transmittal medium may be reporting forms, if transmitted to the Regional Office, or punched cards, magnetic tape, or telecommunication.

7.3.3 Reporting Forms and Record Layouts

A. Reporting Forms

There are four reporting forms used for State and area estimates. (Two forms are used for reporting data and two for reporting comments.) The forms differ for monthly data and for annual data, with separate comment forms for each.

The forms for reporting data are as follows:

1. Annual Reporting Form (SO-234) - Use this form to report twelve months of data plus the annual average for any employment, hours, or earnings series. A separate form is used for each datatype. Several series may be reported on one form.
2. Monthly Reporting Form (SO-235) has two functions:

Report Monthly Estimates - Use this form to report all data types for the two required months - the current data month and the previous data month. Employment estimates may be reported separately from the hours and earnings estimates; however, three of the hours and earnings data types (AWE, AWH, AHE) must be reported on the same form. Several series may be reported on the same form. A separate form is used for each State/area/data month.

Report Annual Averages - Use this form to report the ANNUAL AVERAGES ONLY for all data types. Employment datatypes may be reported separately from earnings datatypes. Again, however, three of the hours and earnings datatypes must be reported together (AWE, AWH, AHE). Several series may be reported on one form. A separate form is used for each State/area/year.

The forms for reporting comments are as follows:

1. Annual Comment Form (SO-234C) - Use this form to report comments on the twelve months of data and the annual average for any estimates. This form must be submitted together with the form reporting the annual data. Several series may be included on one form. A separate form is used for each State/area/year/datatype.
2. Monthly Comment Form (SO-235C) - Use this form to submit comments which explain changes in the level or trend of the estimates submitted on the monthly data form.

See Appendix C for examples of the forms described above.

B. Record Layouts

There are also a number of record layouts used for State and area data. These layouts are used to transmit data in machine-readable form on magnetic tapes, punched cards, and via telecommunication. The layouts vary slightly from the reporting form in that data items are split between two cards.

The record layouts are as follows:

Monthly Data, Cards 1 and 2 - These follow the format of the monthly form (SO-235), except that data are split between two cards. The card code indicates that the data are monthly. Employment, hours, and earnings datatypes may be submitted separately or together, however, three of the hours and earnings data types (AWE, AWH, AHE) must be included on one record. The first monthly card (The D card) is used to submit the datatypes which are expected from most, if not all, States and areas. Since Women Workers and Average Weekly Overtime Hours will not be sent initially by many States and areas, they have been placed on the second card (The E card). All required time periods must also appear on each record. Only one State/area/data month/series is included on each record. See Exhibits 7.B.1.A+B.

Monthly Comment Card - This follows the format of the monthly form (SO-235C) used to report comments on data submitted in the monthly format. Comments may refer to a single datatype or a combination of datatypes. Appropriate datatype codes are included with the record format. See Exhibit 7.B.2.

Annual Data, Cards 1 and 2 - These follow the format of the annual form (SO-234) except that data are split between two cards in order to accommodate a six-digit field size. January through June are recorded on the first card (B card) and July through the annual average are recorded on the second card (C card). The card code assigned to each record designates that annual data are being reported. Only one State/area/year/series/data type is included on each record. See Exhibits 7.B.3.A+B.

Annual Averages - These follow the format for the SO-235 when it is used to report annual averages only. Only the ANNUAL AVERAGES are included. The employment estimates may be transmitted with, or separately from, the hours and earnings estimates; however, three of the hours and earnings data types (AWH, AWH, AHE) must be included on one record. Only one State/area/year/series is included on a record. See Exhibits 7.B.4.A+B.

Annual Comment Card - This follows the format of the annual comment form (SO-234C). A comment may apply to a single datatype or a combination of datatypes; appropriate datatype codes are included with the record. See Exhibit 7.B.5

Examples of the reporting forms appear in Appendix C while record layouts described above are included in Exhibit 7-B.

7.3.4 Edit and Screening Criteria

BLS processes monthly and annual average estimates through edit and screening programs to reject incomplete or incorrectly coded data records and to assess the reasonableness of the estimates.

The States are to edit and screen estimates prior to transmitting them to BLS, as all estimates are expected to meet the edit and screening criteria used by BLS. The criteria used are described in Exhibit 7-A. States should establish their edit and screening criteria accordingly.

7.3.5 Comment Codes

Estimates which do not fall within expected ranges in screening should be explained by the use of comment codes. Comment codes can be reported on machine-readable data records and should also be submitted using the appropriate comment form depending on whether data are in the monthly or annual formats.

Comments are valuable in preparing analytical text on employment and hours and earnings series in State agencies, Regional Offices, and BLS-Washington. The comments provide a factual basis for determining the conditions responsible for noteworthy changes in the data series. The use of the comment codes also eliminates the need to contact the State at a later time to clarify questions concerning the data.

When a comment code is used, be sure that the comment correctly explains the situation and that the datatype code or combination datatype code which notes the data element to which the comment code refers, is also included. Without the inclusion of the datatype code, the comment code cannot effectively be used. See the record format or the reporting form for the list of the datatype codes or the combination datatype codes to be used.

NOTE: Comment codes are associated with the reference month rather than with the actual data, and once entered, comment codes stay on the file. Therefore, if a comment is entered with preliminary data, that comment will automatically appear with the final data as well. Comment codes can be overridden by entering a new comment for that series, datatype, and month. To delete a comment, enter "\$\$" in the comment code field.

Appendix F.2 contains a list of current two-digit comment codes. Only one comment is allowed for each datatype and month. If multiple comments are submitted each successive comment will overwrite the previous comment.

7.4 CLOSING DATES

The monthly State and area estimates are due at BLS in the middle of the sixth week following the reference week (i.e., the calendar week that includes the 12th of the month). Specific closing dates for the State and area estimates are issued by BLS each year via a CES Technical Memorandum (S Series); see Appendix H.2.

The annual revisions (monthly and annual average estimates revised to the new benchmark levels) need to be received by BLS after the preliminary estimates for December have been processed by BLS, but prior to the BLS processing of the preliminary estimates for January. (BLS will not process any of the annual revisions until it has updated its data base, LABSTAT, with the preliminary estimates, on the old benchmark levels, for December.) The BLS due date for receipt of the annual revisions from the States will normally be during the first half of February each year; see Appendix H.2 for the exact date. After this due date, BLS will edit, screen, review, correct, and enter the annual revisions onto LABSTAT before the closing date for the preliminary estimates for January. This procedure has been established to ensure that the final estimates for December, the estimates for the preceding months, and the preliminary estimates for January will be comparable on LABSTAT (i.e., they will all be on the new benchmark levels.)

7.5 STATE AND AREA ESTIMATES TRANSMITTAL REQUIREMENTS

State and area estimates may be prepared on reporting forms only if the Regional Office will accept them for processing. Estimates which are transmitted directly to BLS-Washington by the State must be in machine-readable form.

Three procedures for transmitting State and area estimates are available to the States.

- Transmission in machine-readable form directly to BLS-Washington;
- Transmission via telecommunication directly from the State to BLS-Washington;
- Transmittal on a reporting form to BLS-Washington via the Regional Office.

The first and second procedures noted are the preferred methods. The last procedure is dependent upon the approval of the Regional Office, and is an alternative for those States lacking the machine capabilities for either of the preferred methods.

The three transmittal options are described below. The Regional Office staff will assist in converting from one transmittal medium to another.

7.5.1 Machine-Readable Data

Data in "machine-readable" form are in a format that can be entered directly into the BLS-Washington processing system without additional conversion. This includes magnetic tapes or punched cards.

States may transmit their State and area monthly and annual average data using either medium. Magnetic tape is preferred to punched cards due to the ease of handling the tapes. A shuttle system for the tapes can be established between the State and BLS-Washington by request to the Regional Office. The data and comment record layouts, keypunch instructions, and the tape specifications for machine-readable data are contained in Exhibit 7-B. If cards or tape are used, they must be transmitted in time to reach BLS-Washington by the due date (see Appendix H.2 -- Closing Dates).

7.5.2 Telecommunication Directly from a State to BLS-Washington

Through the use of a telecommunication link with BLS-Washington's processing center, a State can transmit data directly to BLS-Washington in a matter of minutes. The availability of transmission equipment in some States has made this direct transmission of data to BLS-Washington over telephone lines much more efficient than mailing procedures. Appendix I provides information on establishing and using the telecommunication process. Since telecommunication from the States directly to BLS-Washington is much more efficient than the physical transmittal of cards or tapes, it is expected to become the normal data transmission procedure.

States using telecommunication are to transmit the data for receipt by the closing dates shown in Appendix H.2. Due to the speed with which the process is executed, the actual transmission may take place as late as the closing date. Data must be received no later than close of business (COB) at BLS-Washington. Record layouts for telecommunication are the same as those used to transmit the machine-readable data on magnetic tape.

7.5.3 Estimates Transmitted to the Regional Office

At the option of the Regional Office, monthly and annual average estimates may be prepared on the reporting forms, for transmittal to the Regional Office rather than to BLS-Washington. The Regional Office staff will convert the estimates to machine-readable form before transmitting, either via the regional Remote Terminal Network (RTN) system or via a minicomputer link with the BLS-Washington data processing center. Such a procedure would be established by the Regional Office, which also would establish mailing dates for the States for monthly and annual average estimates. The closing dates noted in Appendix H.2 apply to the transmission using reporting forms; therefore, the closing or mailing dates for the State mailing to the Regional Office would vary from those dates in Appendix H.2.

Monthly estimates which are sent to the Regional Office may be typed on the BLS reporting form -- BLS Monthly Report on Employment, Hours, and Earnings. See Appendix C for an example of form SO-235. Report monthly comments at the same time that you report monthly data. Use form SO-235C which is also shown in Appendix C.

Annual average estimates of employment or hours and earnings datatypes, along with the monthly employment estimates adjusted to new benchmark levels, may be typed and mailed on the annual reporting form -- Annual Report on Employment Hours and Earnings. See Appendix C for examples of annual reporting forms for data and comments (SO-234, SO-234C). Report comments, using the annual comment form, at the same time that you report annual data.

Detailed instructions for the preparation of these forms are contained in Exhibit 7-D and on the back of each form.

7.5.4 BLS-Washington Mailing Address

Mail magnetic tapes and punched cards which are being sent to BLS-Washington to the following address:

Bureau of Labor Statistics
CES State and Area Estimates
Federal/State Monthly Surveys (Mail Code 19)
441 G Street, N.W.
Washington, D.C. 20212

States which transmit estimates to the Regional Office for processing will be given the appropriate mailing address by the Regional Office.

7.6 BLS PROCESSING AND UPDATING OF THE STATE AND AREA DATA BASE

7.6.1 Overview

Regardless of the method of transmission, once the data are received at BLS the mechanical processing to update the State and area data base begins. The data, stored in datasets on-line at the processing center, are processed through a series of programs by BLS-Washington. These programs:

- . produce a printout of the transmitted data;
- . produce a report comparing benchmark revisions;
- . edit and screen the data;
- . update the data base with "clean" data;
- . reject data which fail the edit and screening checks;
- . produce a listing of the output from the edit and screening checks;
- . produce monthly publication tables; and,
- . update LABSTAT (LABSTAT is the BLS central repository of economic data in time series form).

7.6.2 Listings From BLS-Washington

Various listings are prepared by BLS-Washington in the course of processing CES State and area estimates. These listings cover all phases of the processing, and allow for the review and correction of the data at all steps.

A. Facsimiles

States which transmit estimates directly to BLS-Washington via telecommunication, may receive a Facsimile of the data received by BLS-Washington, through an automatic return transmission from the processing center to the State. If a formatted facsimile report is desired as a result of transmission an additional step will be added to the JCL used for transmission. Please contact your regional office to arrange for this procedure. Simultaneously, the Regional Office also receives a Facsimile via the RTN. This Facsimile closely resembles the BLS reporting forms for monthly and annual data, depending upon the type of data transmitted. In the facsimile, however, comment codes are displayed with the data items to which they refer.

The facsimile is run prior to any edit and screening of the data and is a formatted duplicate of the data which were transmitted. No editing is done to the data in this program. The identifying information (State code, area code, series code, and card code) are matched to master files in order to assign titles. Codes which cannot be identified, e.g., card code in the transmission, are noted and listed separately at the end of the report. Incorrect State and area codes are listed as "Unknown" and any series for which no title exists on the "Master" list is also tagged as "Unknown".

The text for any comment codes reported with the data is listed at the end of the report with the numeric comment code translated into the definition for that code. This allows for an easier review of the comment codes for reasonableness.

Facsimiles can be used to verify that the data received by BLS-Washington agrees with the data transmitted by the State or the Regional Office.

Facsimiles are sent to the Regional Office for each magnetic tape or deck of punched cards received by BLS-Washington directly from a State. No Facsimile is sent to the State, however, when a magnetic tape or punched cards are used. Facsimiles are also transmitted to the Regional Offices in response to all Regional Office transmissions if the procedure has been established.

BLS-Washington produces in-house copies of Facsimiles for all data which are transmitted. If a State which does not transmit data via telecommunication wishes to receive Facsimiles of its data, a written request should be made to the Regional Office and procedures will be established.

B. Edit and Screening Report

After the Facsimile has been reviewed for proper record format, the edit and screening program is executed. This module compares the new data against the edit and screening criteria listed in Exhibit 7-A. As a result of this program the database is updated with the "clean" data and the Edit and Screening report is produced, which lists questionable and rejected data. A dataset of rejected records is created.

The sections of the edit/screening report are as follows:

<u>Part Number</u>	<u>Contents</u>
1	Listing of all data used as input
2	Records which failed editing criteria
3	Monthly data which failed screening criteria and were rejected
4	Annual data which failed screening criteria and were rejected
5	Monthly data which were commented on
6	Annual data which were commented on
7	Monthly data which were noted but not rejected
8	Annual data which were noted but not rejected
9	Number of records in error dataset output.

Part 1 (Input Listing) - This section is a listing of all data submitted as input for the program. This section lists the input after it has been sorted. The records listed in this section are shown exactly as they appear in the input dataset, i.e., without blanks or other added spaces to aid in reading.

Part 2 (Edit Rejects) - All data are submitted to certain editing criteria to ensure that they are properly and validly coded and formatted. Records which failed the editing criteria are listed in this section of the edit/screening printed output. These data must be reviewed, corrected and resubmitted before being screened.

Part 3 (Monthly Screening Rejects) - Some, but not all, monthly records which fail screening criteria are rejected. Monthly records which have been rejected as a result of failing to meet screening criteria are displayed in Part 3 of the edit/screening report. Messages are included to explain why data were rejected. These data must be corrected and resubmitted if they are to appear in the data base.

Part 4 (Annual Screening Rejects) - Some, but not all, annual records which do not meet screening criteria are rejected. Part 4 of the edit/screening report contains any rejected annual data. This section contains explanations of the cause for rejection as well as providing additional information useful for review. Data which appear in this section must be corrected and resubmitted if they are to appear in the data base.

Part 5 (Commented Monthly Data) - Data in the monthly format which have comments related to them appear in Part 5 of the edit/screening report. These data are separated for the reviewer's information. Data in this section have been written to the data base. This section contains only those items which were commented and failed screening but were written to the database based on the fact that a comment was submitted. Comments cause some screening checks to be overridden.

Part 6 (Commented Annual Data) - Data in the annual format which have comments associated with them appear in part 6 of the edit/screening report. Data in this section have already been written to the data base but are displayed separately for the reviewer's information. This section contains only commented data that would have failed screening except for the fact that a comment was submitted with it. Comments cause some screening checks to be overridden.

Part 7 (Noted Monthly Data) - Some data in the monthly format fail screening but are noted only, not rejected. These data are written onto the data base. They appear in this section to indicate to the reviewer that they are outside tolerance levels even though not rejected because of it. Part 7 of the printed edit/screening report contains monthly data which are noted as outside tolerances. Data in this section appear for the reviewer's information and require no action.

Part 8 (Noted Annual Data) - Some annual data which fail screening criteria are only noted. Although the data have failed to meet some screening criteria, that failure is not of such severity as to warrant rejection of the data. Part 8 of the edit/screening report contains annual data which are noted as being outside tolerance levels. These data have been written to the data base but were noted for the reviewers information. No further action is needed than to review the printed record and message.

Part 9 (Errors in Error Dataset) - The output of the edit/screening module is of two kinds.

- . printed report
- . error dataset

The printed report displays the data in various ways and indicates those data which did not meet screening criteria at various levels. An error dataset is created of all records which were rejected because they did not meet the criteria. Part 9 of the edit/screening output gives the count of the number of records rejected by the edit/screening module.

This report is automatically generated by the edit and screening program and transmitted, simultaneously, to the Regional Office (via the RTN) and to BLS-Washington. The Regional Office reviews the report and makes the necessary corrections.

The rejected data are stored in an "error dataset" at the processing center and are corrected mechanically via terminals or minicomputers. These corrected data are then reprocessed and a second Edit and Screening report and "error dataset" are created, if necessary. The process is then repeated until all errors have been corrected, or the regional office indicates that further correction is unnecessary.

The Edit and Screening report details all data in question and is essential in reviewing the data. States using the minimum edit and screening criteria suggested, when reviewing their data prior to transmission, will vastly reduce the number of errors that need to be corrected after transmission. Comment codes to explain variations in the data which may fail the criteria given should be used regularly.

States do not currently receive copies of the Edit and Screening reports, however, if a copy is desired the State may contact the Regional Office which will then assist in making the necessary arrangements.

C. Benchmark Comparison Report

The benchmark comparison report provides a comparison of benchmark revisions on a month-to-month basis. All data submitted in the annual format are input to the benchmark comparison module. Data on the revised benchmark levels are compared to data already on file. The formula used for benchmark comparison is included in Exhibit 7-A as formula 4.

The benchmark comparison report provides the only comparison of data for one benchmark to data for another benchmark. No comparison between benchmarks is made in the screening module. The benchmark comparison report displays the newly submitted benchmark data and the 'old' data already on file. Several other items are also reported:

- . net difference
- . percent change
- . differences in trend.

A difference in trend is noted when the direction of month-to-month change in one benchmark is not the same as the direction of month-to-month change in the new benchmark. Such a difference in trend is noted by a '?' indicator.

If data which are not numeric or data which are not zero-filled are used as input to the benchmark comparison module, these data will appear in the report preceded and followed by a '#'.

7.7 USES OF STATE AND AREA DATA

In addition to the regular State publications which contain State and area estimates, several national publications also utilize the State and area data which have been supplied by the States.

Monthly, BLS-Washington produces tables to be included in the Employment and Earnings publication and in the State and area employment and unemployment news release. The data reflect the latest monthly division level estimates from the monthly State reports. Data are published for both States and areas. The necessity to process data in order to meet the publication deadline each month is the primary reason for the monthly closing schedule provided in Appendix H.2. Data must be received, edited, screened, corrected if necessary, and entered onto the data base in order to be included in the monthly BLS publications.

Annually, the State and area annual averages are published in two publications. All annual averages for the division levels are published in the May issue of Employment and Earnings. Annual averages for all publishable series are released each year in the State and area annual bulletin. The data published in these two publications reflect the latest benchmark revision for the States and areas. The deadline for the receipt of the revised data on the new benchmark levels facilitates the timely release of these publications.

State and area data are also used in publications such as:

- BLS Monthly Labor Review (MLR)
- Statistical Abstract of the United States
- Employment and Training Report of the President

Numerous requests for data or information are also answered using these data. State and area data are stored on LABSTAT for this purpose. However, even though the State and area database contains both publishable and unpublishable data, only publishable data are released to the public. However, all data are accessible to the Regional Offices for their review and analysis via LABSTAT.

EXHIBIT 7-A

EDIT AND SCREENING CRITERIA AND FORMULASCRITERIA

The following mechanical and manual edit checks are performed by BLS to ensure that the correct State/area/series are being modified and to detect any duplicate records or any records which do not match with a master record on file.

MONTH DATE CHECK - Upon receipt, the month and year on the reporting form are checked and logged to ensure that data are for the month indicated and the reporting form is the next in the series. This is a partially manual check done specifically for data to be keypunched. This check is made mechanically on all records as part of the screening program.

STATE AND AREA CODE CHECK - State and area names and their corresponding FIPS codes are checked manually to ensure that both carry the correct numeric codes. The numeric codes are compared mechanically with a file of valid individual State and area codes. In addition, each State/Area combination is checked for validity.

SERIES CODE CHECK - Series codes for each State and area are checked against a master list to ensure that the series code is acceptable, i.e., on the master list or in Appendix E.2, and that it is valid for the specific State and area.

CHECK DIGIT CHECK - A check digit is calculated based on the 12-digit State/area/series combination. The check digit is calculated using a Modulus10 method. The check digit reported on each record must match the precalculated check digit.

BENCHMARK YEAR AND QUARTER - The benchmark year and quarter is a 3-digit field which identifies the benchmark year and quarter to which the estimates were adjusted. This check ensures that data being transmitted are on the same benchmark as data in the database.

NUMERICS - All appropriate fields are checked for numerics.

BLANKS - All appropriate fields are checked for blanks.

COMMENTED DATA - These data are edited and screened in accordance with all appropriate criteria. All commented data will be accepted including commented data which fail screening criteria. Commented data which fail to meet screening criteria will appear in the section of the edit/screening printed output containing commented data.

EXHIBIT 7-A

The criteria listed below are mechanically applied to all estimates for all datatypes (employment, hours, and earnings) unless otherwise specified. Data items which fall outside the established criteria are listed on the questionable data report as having been rejected or as having been accepted with a note. Rejected data must be corrected. Data accepted with a note should be reviewed, but need not be changed. The formulas used as well as the established tolerances and factors follow.

PRELIMINARY VS. FINAL DATA REVISION - Each final estimate is compared to the preliminary estimate for that series for changes which fall beyond the tolerance range (Formula 1). Failure to meet this criteria will result in data being noted but not rejected.

AWE = AWH X AHE CHECK - The average weekly earnings are checked by multiplying the average weekly hours by the average hourly earnings. Failure to compute exactly will result in rejection of data. This check is made for both the current month and the previous month as well as for annual data. A one cent tolerance is allowed.

EXPECTED LINK CHECK - An average or expected link and standard deviation are derived for each employment series, based on the most current six years of historical data. The link for the current month is computed by the screening program, and then compared to the expected link. If the current link is within + 1 standard deviations of the expected link, the data are accepted. If the current link is between + 1 and + 2 standard deviations, the data are noted; and if the current link is more than + 2 standard deviations from the expected link, the data are rejected. There are two exceptions to these screening criteria, which are a minimum standard deviation of .01 and a flat tolerance of 200 employees. Thus, if the difference between the current month and the previous month is less than one percent or 200 employees, the data are accepted.

HOURS AND EARNINGS CHECK - Average weekly hours and average hourly earnings are screened using flat tolerances of 7.5 and 15 percent. If the difference between the previous and current month is between 7.5 and 15 percent, the data are noted; if the difference is greater than 15 percent, the data are rejected.

PW or WW > AE - Production Worker or Women Worker estimates are checked individually to be sure they are not greater than the total AE figure. Failure to pass this check will result in rejection of the Production or Women Worker data. This check is done separately for each of these datatypes.

AWOH > AWH - Average Weekly Overtime Hours are checked to be sure they are not greater than Average Weekly Hours. Failure to pass this check will result in rejection of Average Weekly Overtime Hours data.

EXHIBIT 7-A

BENCHMARK COMPARISON - A month-by-month comparison of estimate to revision is made, e.g., 'old' January compared to revised January. This check notes data which exceed tolerances. This check uses the same tolerances detailed in Formula 1. No data are rejected by this check.

ANNUAL AVERAGE CHECK - The program checks the annual average by adding the months, dividing this sum by twelve, and comparing this figure to that submitted. Any significant difference results in the data being rejected. This is noted by the annual average being printed with a message. (Formula 3).

EXHIBIT 7-A

EDIT/SCREENING FORMULAS

MONTHLY DATA

1. PRELIMINARY VS. FINAL

$$A) \text{ final estimate} - \text{preliminary estimate} = \text{difference}$$

$$\frac{\text{difference}}{\text{preliminary estimate}} \times 100 = \text{percent change}$$

The difference and percent change is computed for each estimate and compared to the following tolerance levels which differ by datatype. Percent change is only computed for Employment.

The employment size is determined by the preliminary estimate.

AE

<u>Size</u>	<u>max. % change</u>	<u>max. absolute change</u>
0 - .99	----	.1
1.0 - 9.99	10	.5
10.0+	5	5.0

AHE

<u>Size</u>	<u>max. absolute difference</u>
.01 - 2.99	.05
3.00 - 4.99	.10
5.00 - 7.99	.15
8.00+	.20

AWH

A universal tolerance of 1.0 hour is to be used.

Any data element which exceeds any of the above tolerance levels will be listed with a note, but will still be accepted into the database.

MONTHLY AND ANNUAL DATA

- Expected Link Check - The expected link check uses past trends in data for a series to set the tolerance level for the current series. These values are only computed for series with four or more years of data. For series with fewer than four years of data the check is not done. An expected link is developed for each State/area/series/datatype and for each month. The expected link is a ratio of the current month to the previous month:

EXHIBIT 7-A

Current
Previous

These steps are followed to develop an average link:

- . The six most current years of data are used, if available.
- . The over-the-month ratios or links are calculated.
- . The outlier test is performed, and any links which exhibit unusual trends are discarded.
- . The remaining links for the month are summed.
- . The average link is computed.

The outlier test is performed by following these steps.

- . Sort the over-the-month changes (links) into ascending order.
- . Compute the range (X7) of over-the-month changes (X6 - X1). If $X7 < .05$, do not perform the outlier test.
- . Identify the smallest numeric ratio (X1) and the next smallest numeric ratio (X2).
If $\frac{X2 - X1}{X7} \geq .6$ outlier (L)
- . Identify the largest numeric ratio (X6) and the next largest numeric ratio (X5).
If $\frac{X5 - X6}{X7} \geq .6$ outlier (U)

The standard deviations are developed as follows:

- . The average link is subtracted from each individual link and the difference squared.
- . Each of the squared differences is added together and divided by the number of years used minus one.
- . The square root of the result is computed.

When the square root has been computed, the result is used as the standard deviation. The formula used for computing the standard deviation is:

$$\sqrt{\frac{\sum_{i=1}^n (L_i - L)^2}{n-1}}$$

L_i = i the year ratio.

L = Average Link

n = number of observations, currently = 6

EXHIBIT 7-A

ANNUAL DATA

$$3. \frac{\text{sum of monthly data}}{12} = \text{computed average}$$

$$\text{input average} - \text{computed average} = \text{difference}$$

The tolerances, which determine rejection, differ by data type. The tolerances which follow are absolute rather than percentages:

Employment	difference	>.1 - Rejected
AWH	difference	>.4 - Rejected
AHE	difference	>.04 - Rejected

BENCHMARK COMPARISON FORMULA

$$4. \frac{\text{revised month} - \text{old month}}{\text{revised month}} \times 100 = \text{percent change}$$

The percent change is then compared to the tolerances detailed in Formula 1.

EXHIBIT 7-BRECORD LAYOUTS AND TAPE SPECIFICATIONS

The following record layouts are to be used for all data transmitted to BLS in machine-readable form. A list of the appropriate datatype codes and, where applicable, datatype combination codes are included with each layout. Please leave blank any fields for items that are not being reported. It is necessary to transmit comment cards at the same time that data cards are transmitted.

Keypunch instructions and magnetic tape specifications are also included with each record layout.

- EXHIBIT 7.B.1.A Monthly Data, Card 1
- EXHIBIT 7.B.1.B Monthly Data, Card 2
- EXHIBIT 7.B.2 Monthly Comment Card
- EXHIBIT 7.B.3.A Annual Data, Card 1
- EXHIBIT 7.B.3.B Annual Data, Card 2
- EXHIBIT 7.B.4.A Annual Data - Annual Averages Only, Card 1
- EXHIBIT 7.B.4.B Annual Data - Annual Averages Only, Card 2
- EXHIBIT 7.B.5 Annual Comment Card

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EXHIBIT 7.B.1.A

CES STATE & AREA

Record Format and Keypunching Instructions for the First Card of the Monthly Report on Employment, Hours and Earnings (SO-235). Record length is 80.

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
1	Benchmark Year/ Quarter	1-3	3	Enter Year and Quarter of the current benchmark	N R D
2	Reference Year/ Month	4-7	4	Enter Year and Month to which the data pertain, in the form yymm where yy=last two digits of the year, mm=two digit numeric representation for the month, e.g. represent February as '02'	N R D Z
3	State Code	8-9	2	Enter State numeric FIPS Code	N R D Z
4	Area Code	10-13	4	Enter Area numeric FIPS Code	N R D Z
5	Series Code	14-19	6	Enter an approved 6-digit Series code	N R
6	Check Digit	20	1	Enter the Check Digit for the State/ area/series combination	N
7	Series Type	21	1	Enter '3' for not seasonally adjusted	N D
8	Card Code	22	1	Enter 'D' to submit card one of the two monthly data cards	A D
9	Current Month All Employees	23-28	6	Enter Current Month All Employee data	N R Z
10	Previous Month All employees	29-34	6	Enter Previous Month All Employee data	N R Z

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EXHIBIT 7.B.1.A

11	Current Month Production Workers	35-40	6	Enter Current Month Production Worker data	N R Z
12	Previous Month Production Workers	41-46	6	Enter Previous Month Production Worker data	N R Z
13	Current Month Average Weekly Earnings	47-52	6	Enter Current Month Average Weekly Earnings data	N R Z
14	Previous Month Average Weekly Earnings	53-58	6	Enter Previous Month Average Weekly Earnings data	N R Z
15	Current Month Average Weekly Hours	59-62	4	Enter Current Month Average Weekly Hours data	N R Z
16	Previous Month Average Weekly Hours	63-66	4	Enter Previous Month Average Weekly Hours data	N R Z
17	Current Month Average Hourly Earnings	67-71	5	Enter Current Month Average Hourly Earnings data	N R Z
18	Previous Month Average Hourly Earnings	72-76	5	Enter Previous Month Average Hourly Earnings data	N R Z

1/ Keypunching Legend

N = Numeric Characters

A = Alphabetic Characters

R = Right Justify (Do Not Punch Decimal Point)

Z = Zero Fill

D = Field Can be Duplicated

FIELDS FOR UNREPORTED DATATYPES MUST BE LEFT BLANK

MAGNETIC TAPE SPECIFICATIONS9 TRACK (EBCDIC) EXTENDED BINARY CODED DECIMAL INTERCHANGE CODE
1600 BYTES PER INCH (BPI).

BLOCKING FACTOR: 20

RECORD LENGTH: 80

DATA SET NAME: DSN=BLS790.SAnn.Tyymm

ENTER THE FIPS ALPHA CODE FOR "nn", yy=YEAR, mm=MONTH

STANDARD IBM HEADER LABELS OR AMERICAN NATIONAL STANDARD

(ANSI) LABELS. ALSO, ARRANGEMENTS CAN BE MADE WITH F/SMS TO SEND
UNLABELED TAPES.

EXHIBIT 7.B.1.B

CES STATE & AREA

Record Format and Keypunching Instructions for the Second Card of the Monthly Report on Employment, Hours and Earnings (SO-235). Record length is 80.

(USE THIS CARD TO SUBMIT WOMEN WORKERS AND OVERTIME HOURS ONLY)

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
1	Benchmark Year/ Quarter	1-3	3	Enter Year and Quarter of Current benchmark	N R D
2	Reference Year/ Month	4-7	4	Enter Year and Month to which the data pertains	N R D Z
3	State Code	8-9	2	Enter State numeric FIPS Code	N R D Z
4	Area Code	10-13	4	Enter Area numeric FIPS Code	N R D Z
5	Series Code	14-19	6	Enter an Approved 6-digit Series Code	N R
6	Check Digit	20	1	Enter check digit for State/area/ series combination	N
7	Series Type	21	1	Enter '3' for not seasonally adjusted	N D
8	Card Code	22	1	Enter 'E' to submit Women Worker and/or Overtime data	A D
9	Current Month Average Weekly Overtime Hours	23-25	3	Enter Current Month Average Weekly Overtime Hours data	N R Z
10	Previous Month Average Weekly Overtime Hours	26-28	3	Enter Previous Month Average Weekly Overtime Hours data	N R Z
11	Current Month Women Workers	29-33	5	Enter Current Month Women Worker data	N R Z

EXHIBIT 7.B.1.B

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
12	Previous Month Women Workers	34-38	5	Enter Previous Month Women Worker data	N R Z

1/ Keypunching Legend

N = Numeric

A = Alphabetic

R = Right Justify (Do Not Punch Decimal Points)

Z = Zero Fill

D = Field Can Be Duplicated

FIELDS FOR UNREPORTED DATATYPES MUST BE LEFT BLANK

MAGNETIC TAPE SPECIFICATIONS9 TRACK (EBCDIC) EXTENDED BINARY CODED DECIMAL INTERCHANGE CODE
1600 BYTES PER INCH (BPI).

BLOCKING FACTOR: 20

RECORD LENGTH: 80

DATA SET NAME: DSN=BLS790.SAnn.Tyymm

ENTER THE FIPS ALPHA CODE FOR "nn", yy=YEAR, mm=MONTH

STANDARD IBM HEADER LABELS OR AMERICAN NATIONAL STANDARD
(ANSI) LABELS. ALSO, ARRANGEMENTS CAN BE MADE WITH F/SMS
TO SEND UNLABELED TAPES.

EXHIBIT 7.B.2

CES STATE & AREA

Record Format and Key punching Instructions for the Monthly Comment Card on Employment, Hours, and Earnings (SO-235C). Record length is 80.

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
1	Benchmark Year/ Quarter	1-3	3	Enter Year and Quarter of current benchmark	N R D
2	Reference Year/ Month	4-7	4	Enter Reference Year and Month to which data pertain	N R D Z
3	State Code	8-9	2	Enter State Numeric FIPS Code	N R D Z
4	Area Code	10-13	4	Enter Area Numeric FIPS Code	N R D Z
5	Series Code	14-19	6	Enter an Approved 6-digit Series Code	N R
6	Check Digit	20	1	Enter Check Digit for State/area/series Combination	N
7	Series Type	21	1	Enter '3' for not seasonally adjusted	N
8	Card Code	22	1	Enter 'H' to submit monthly comments	A D
9	Datatype	23-24	2	Enter Datatype to which first comment applies	N R Z
10	Month	25-26	2	Enter 2-digit code for the Month to which the first comment applies	N R Z
11	Comment Code	27-28	2	Enter first comment	N R Z
12-35		29-76		SEE NOTE	

EXHIBIT 7.B.2

NOTE: Submit as many as nine comments per card as needed. To submit additional comments, include each of the following three items:

- . datatype
- . month code, and
- . comment code

Submit data type, month and comments in contiguous columns. Do not leave blanks between comments when submitting multiple comments.

FIELDS FOR UNUSED DATATYPES, MONTHS AND COMMENTS MUST BE LEFT BLANK

1/ Keypunching Legend

- N = Numeric
- A = Alphabetic
- R = Right Justify (Do Not Punch Decimal Points)
- Z = Zero Fill
- D = Field Can Be Duplicated

Table of Valid Datatype or Datatype Combination Codes:

- 01 = All Employees (AE)
- 02 = Women Workers (WW)
- 03 = Production Workers (PW)
- 04 = Average Weekly Earnings (AWE)
- 05 = Average Weekly Hours (AWH)
- 06 = Average Hourly Earnings (AHE)
- 07 = Average Weekly Overtime Hours (AWOH)

- 70 = All Datatypes
- 71 = AE, WW, PW
- 72 = AWE, AWH, AHE
- 73 = WW, PW, AWOH

MAGNETIC TAPE SPECIFICATIONS

9 TRACK (EDCDIC) EXTENDED BINARY CODED DECIMAL INTERCHANGE CODE
1600 BYTES PER INCH (BPI)
BLOCKING FACTOR: 20
RECORD LENGTH: 80
DATA SET NAME: DSN=BLS790. SAnn. Tyymm
ENTER THE FIPS ALPHA CODE FOR "nn", yy=YEAR, mm=MONTH
STANDARD IBM HEADER LABELS OR AMERICAN NATIONAL STANDARD
(ANSI) LABELS. ALSO, ARRANGEMENTS CAN BE MADE WITH F/SMS
TO SEND UNLABELED TAPES.

EXHIBIT 7. B. 3. A

CES STATE & AREA

Record Format and Key punching Instructions for the First Card of the Annual Report on Employment, Hours, and Earnings (SO-234). Record length is 80.

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
1	Benchmark Year/ Quarter	1-3	3	Enter the Year and Quarter of the current benchmark	N R D
2	Datatype	4-5	2	Enter the appropriate Datatype code from the table below	N R D Z
3	Reference Year	6-7	2	Enter the last two digits of the year to which the data pertain	N R D
4	State Code	8-9	2	Enter the State numeric FIPS code	N R D Z
5	Area Code	10-13	4	Enter the Area numeric FIPS code	N R D Z
6	Series Code	14-19	6	Enter an Approved 6 - digit Series Code	N R
7	Check Digit	20	1	Enter the Check Digit for the State/area/series combination	N
8	Series Type	21	1	Enter '3' for not seasonally adjusted data	N D
9	Card Code	22	1	Enter 'B' to submit January - June data	A D
10	January Data	23-28	6	Enter January data	N R Z
11	February Data	29-34	6	Enter February data	N R Z
12	March Data	35-40	6	Enter March data	N R Z

EXHIBIT 7. B. 3. A

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD OS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
13	April Data	41-46	6	Enter April data	N R Z
14	May Data	47-52	6	Enter May data	N R Z
15	June Data	53-58	6	Enter June data	N R Z

Only one annual data type may be submitted per card. The individual data type codes used for submitting annual data are:

- 01 = All Employees
- 02 = Women Workers
- 03 = Production Workers
- 04 = Average Weekly Earnings
- 05 = Average Weekly Hours
- 06 = Average Hourly Earnings
- 07 = Average Weekly Overtime Hours

1/ Keypunching Legend

- N = Numeric
- A = Alphabetic
- R = Right Justify
- Z = Zero Fill
- D = Field Can Be Duplicated

MAGNETIC TAPE SPECIFICATIONS

9 TRACK (EBCDIC) EXTENDED BINARY CODED DECIMAL INTERCHANGE CODE
1600 BYTES PER INCH (BPI).

BLOCKING FACTOR: 20

RECORD LENGTH: 80

DATA SET NAME: DSN=BLS790. SAnn. Tyymm

ENTER THE FIPS ALPHA CODE FOR "nn", yy=YEAR, mm=MONTH

STANDARD IBM HEADER LABELS OR AMERICAN NATIONAL STANDARD (ANSI) LABELS. ALSO, ARRANGEMENTS CAN BE MADE WITH F/SMS TO SEND UNLABELED TAPES.

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EXHIBIT 7. B. 3. B

CES STATE & AREA

Record Format and Keypunching Instructions for the Second Card of the Annual Report on Employment, Hours, and Earnings (SO-234). Record length is 80.

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
1	Benchmark Year/ Quarter	1-3	3	Enter the Year and Quarter of the current benchmark	N R D
2	Datatype	4-5	2	Choose the appropriate Data- type code from the table below	N R D Z
3	Reference Year	6-7	2	Enter the last two digits of the year to which the data pertain	N R D
4	State Code	8-9	2	Enter the State numeric FIPS code	N R D Z
5	Area Code	10-13	4	Enter the Area numeric FIPS code	N R D Z
6	Series Code	14-19	6	Enter an Approved 6-digit Series Code	N R
7	Check Digit	20	1	Enter the numeric Check Digit for the State/area/series combination	N
8	Series Type	21	1	Enter '3' for not seasonally adjusted data	N D
9	Card Code	22	1	Enter 'C' to submit July through Annual Average data	A D
10	July Data	23-28	6	Enter July Data	N R Z
11	August Data	29-34	6	Enter August Data	N R Z

EXHIBIT 7. B. 3. B

12	September Data	35-40	6	Enter September Data	N R Z
13	October Data	41-46	6	Enter October Data	N R Z
14	November Data	47-52	6	Enter November Data	N R Z
15	December Data	53-58	6	Enter December Data	N R Z
16	Annual Average Data	59-64	6	Enter Annual Average	N R Z

Only one annual data type may be submitted per card. Following are the individual data type codes used for submitting annual data:

- 01 = All Employees
- 02 = Women Workers
- 03 = Production Workers
- 04 = Average Weekly Earnings
- 05 = Average Weekly Hours
- 06 = Average Hourly Earnings
- 07 = Average Weekly Overtime Hours

1/ Keypunching Legend

- N = Numeric
- A = Alphabetic
- R = Right Justify
- Z = Zero Fill
- D = Field Can Be Duplicated

EXHIBIT 7. B. 4. A

CES STATE & AREA

Record Format and Key punching Instructions for Submitting Annual Averages for Employment, Hours and Earnings in the Monthly Format, First Card (SO-235). Record length is 80.

ITEM NO.	ITEM NAME	RECORD POS.	FIELD SIZE	INSTRUCTIONS	KEYPUNCH 1/ INSTRUCTIONS
1	Benchmark Year/ Quarter	1-3	3	Enter Year and Quarter of the current benchmark	N R D
2	Reference Year/ Month	4-7	4	Enter year to which data pertain. Enter month code of '13' as Annual Average month	N R Z D
3	State Code	8-9	2	Enter State numeric FIPS code	N R D Z
4	Area Code	10-13	4	Enter Area numeric FIPS code	N R D Z
5	Series Code	14-19	6	Enter an Approved 6-digit Series Code	N R
6	Check Digit	20	1	Enter the Check Digit for the State/ area/series combination	N
7	Series Type	21	1	Enter '3' for Not Seasonally Adjusted	N D
8	Card Code	22	1	Enter 'D' to submit card one of Annual Average data	A D
9	Annual Average for All Employees	23-28	6	Enter the All Employee Annual Average data	N R Z
		29-34	6	<u>BLANK</u>	B
10	Annual Average for Production Workers	35-40	6	Enter the Production Worker Annual Average data	N R Z

EXHIBIT 7.B.4.A

ITEM NO.	ITEM NAME	RECORD POS.	FIELD SIZE	INSTRUCTIONS	KEYPUNCH 1/ INSTRUCTIONS
		41-46	6	<u>BLANK</u>	B
11	Annual Average for Average Weekly Earnings	47-52	6	Enter the Average Weekly Earnings Annual Average data	N R Z
		53-58	6	<u>BLANK</u>	B
12	Annual Average for Average Weekly Hours	59-62	4	Enter the Average Weekly Hours Annual Average data	N R Z
		63-66	4	<u>BLANK</u>	B
13	Annual Average for Average Hourly Earnings	67-71	5	Enter the Average Hourly Earnings Annual Average data	N R Z

FIELDS FOR UNREPORTED DATATYPES MUST BE LEFT BLANK

- 1/ Keypunching Legend
N = Numeric characters
B = Blank
A = Alphabetic characters
R = Right Justify (Do Not Punch Decimal Points)
Z = Zero Fill
D = Field Can Be Duplicated

EXHIBIT 7. B. 4. B

CES STATE & AREA

Record Format and Key punching Instructions for submitting Annual Averages for Employment, Hours and Earning in the Monthly Format, Second Card (SO-235). Record length is 80.

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
1	Benchmark Year/ Quarter	1-3	3	Enter Year and Quarter of Current benchmark	N R D
2	Reference Year/ Month	4-7	4	Enter Year and Month to which the data pertain. Enter month code of '13' as Annual Average month	N R D Z
3	State Code	8-9	2	Enter State numeric FIPS code	N R D Z
4	Area code	10-13	4	Enter Area numeric FIPS code	N R D Z
5	Series Code	14-19	6	Enter an Approved 6-digit Series Code	N R
6	Check Digit	20	1	Enter check digit for State/area/ series combination	N
7	Series Type	21	1	Enter '3' for not seasonally adjusted	N D
8	Card Code	22	1	Enter 'E' to submit Women Worker and Overtime Averages	A D

EXHIBIT 7.B.4.B.

9	Average Weekly Overtime Hours Annual Average	23-25	3	Enter Average Weekly Overtime Hours Annual Average data <u>BLANK</u>	N R Z
		26-28	3		
10	Women Workers Annual Average	29-33	5	Enter Women Workers Annual Average data	N R Z
11		34-3	5	<u>BLANK</u>	

1/ Keypunching Legend

N = Numeric

B = Blank

A = Alphabetic

R = Right Justify (Do Not Punch Decimal Points)

Z = Zero Fill

D = Field Can Be Duplicated

FIELDS FOR UNREPORTED DATATYPES MUST BE LEFT BLANK

EXHIBIT 7.B.5

CES STATE & AREA

Record Format and Key punching Instructions for the Annual Comment Card on Employment, Hours, and Earnings. Record length is 80.

<u>ITEM NO.</u>	<u>ITEM NAME</u>	<u>RECORD POS.</u>	<u>FIELD SIZE</u>	<u>INSTRUCTIONS</u>	<u>KEYPUNCH 1/ INSTRUCTIONS</u>
1	Benchmark Year/ Quarter	1-3	3	Enter the Year and Quarter of the current benchmark	N R D
2	Datatype	4-5	2	Enter the Datatype to which the comment relates. See table below	N R D Z
3	Reference Year	6-7	2	Enter the last two digits of the year	N R D
4	State Code	8-9	2	Enter the State numeric FIPS code	N R D Z
5	Area Code	10-13	4	Enter the area numeric FIPS code	N R D Z
6	Series Code	14-19	6	Enter an Approved 6-digit Series Code	N R
7	Check Digit	20	1	Enter the Check Digits for the State/ area/series combination	N
8	Series Type	21	1	Enter '3' for not seasonally adjusted	N D
9	Card Code	22	1	Enter 'I' to submit Annual Comments	A D
10	Month Code	23-24	2	Enter two digit representation for month to which first comment applies	N R Z
11	Comment Code	25-26	2	Enter first comment code	N R Z

EXHIBIT 7.B.5

ITEM NO.	ITEM NAME	RECORD POS.	FIELD SIZE	INSTRUCTIONS	KEYPUNCH 1/ INSTRUCTIONS
12-37		27-7		SEE NOTE	N R Z

NOTE: Submit as many as 14 comments per card as needed. To submit additional comments include:

- . month code
- . comment code

for each. Submit months and comments in contiguous columns. Do not leave blanks between comments when submitting multiple comments.

FIELDS FOR UNUSED COMMENTS AND MONTHS MUST BE LEFT BLANK

1/ Keypunching Legend

- N = Numeric
- A = Alphabetic
- B = Blank
- R = Right Justify
- Z = Zero Fill
- D = Field Can Be Duplicated

Only one annual data type may be submitted per card. Following are the individual data type codes used for submitting annual data:

- 01 = All Employees (AE)
- 02 = Women Workers (WW)
- 03 = Productions Workers (PW)
- 04 = Average Weekly Earnings (AWE)
- 05 = Average Weekly Hours (AWH)
- 06 = Average Hourly Earnings (AHE)
- 07 = Average Weekly Overtime Hours (AWOH)

MAGNETIC TAPE SPECIFICATIONS

9 TRACK (EBCDIC) EXTENDED BINARY CODED DECIMAL INTERCHANGE CODE
1600 BYTES PER INCH (BPI)
BLOCKING FACTOR: 20
RECORD LENGTH: 80
DATA SET NAME: DSN=BLS790. SAnn. Tyymm
ENTER THE FIPS ALPHA CODE FOR "nn", yy=YEAR, mm=MONTH
STANDARD IBM HEADER LABELS OR AMERICAN NATIONAL STANDARD
(ANSI) LABELS. ALSO, ARRANGEMENTS CAN BE MADE WITH F/SMS
TO SEND UNLABELED TAPES.

EXHIBIT 7-C

CES STATE & AREA: REQUEST FOR SERIES CODES

TO BE COMPLETED BY STATE AGENCY:

CHECK ONE ☐

☐ Please create a new series code (not on Master List)

☐ Please start a new series (on Master List)

(1) CREATE SERIES CODES

SIC'S SUGGESTED SERIES CODE TO BE USED IN

COMMENTS

(2) START NEW SERIES

SIC'S TITLE SERIES CODE

TO BE COMPLETED BY NATIONAL OFFICE:

APPROVED SERIES CODE SIC'S TITLE

COMMENTS

REGIONAL OFFICE APPROVAL

DATE SENT FROM R.O.

DATE RECEIVED

OEUS APPROVAL

DATE MASTER FILE UPDATED

DATE TRANSMITTED TO R.O.

EXHIBIT 7-D

TRANSMITTING CES STATE AND AREA ESTIMATES VIA REPORTING FORMS
(Monthly and Annual Forms)

Those States which do not have the capability to transmit CES estimates to BLS in machine-readable form may, with the approval of the Regional Office, continue to use the BLS approved reporting forms. Details concerning the proper completion and transmission of these reporting forms are as follows:

A. General Instructions

BENCHMARK YEAR AND QUARTER: Enter the year and the quarter of the most recent benchmark to which the estimates were adjusted. Note the use of quarter rather than month, signifying that the digit that describes the quarter must be a number between 1 and 4. This parameter signals to the system when data on a new benchmark have been transmitted.

STATE AND AREA CODES AND TITLES: Enter State and area codes on each sheet of each reporting form submitted. BLS identification codes for each State and for all currently accepted areas are listed in Appendix E.1.

Always enter the State name in full in the space labeled "State" and enter the two-digit State FIPS numeric code in the adjoining space labeled "code".

When reporting Statewide estimates, enter "0000" as the area code and enter "Statewide" in the area title space.

When reporting data for an area which follows a Metropolitan Statistical Area definition or is included on the list in Appendix E.1, enter the official area title as the "Area" and the standard 4-digit FIPS numeric Area code in the adjoining space labeled "code".

INDUSTRY CODES AND TITLES: Identify each industry or industry combination for which estimates are reported with the industry title and the appropriate series code. Determine the series code and the standard industry title to be used by referring to the SIC codes shown in the "Master List of Series Codes" Appendix E.2. See Section 7.2.2.B for details on starting a new series.

DATA: Report all industry detail published by the State agency. All other unpublished series will also be accepted by BLS-Washington for storage. If Total Nonagricultural employment data are published for the State or an area, estimates for every major division must be reported for the same geographic area. Report Statewide employment estimates for Federal Government, State and Local Government, Wholesale Trade, and Retail Trade.

EXHIBIT 7-D

SEQUENCE: The series should be arranged in series code sequence with each series shown only once.

ROUNDING: Round employment (AE, WW, PW) to the nearest 100; then enter on the form expressed in thousands and tenths of thousands. For example, round an estimate of 9,575 to 9,600 and then enter 9.6 on the form.

Report Average Weekly Earnings (AWE) and Average Hourly Earnings (AHE) rounded to the nearest cent. Report Average Weekly Hours (AWH) and Average Weekly Overtime Hours (AWOH) rounded to the nearest tenth of an hour.

The AWE reported must be the exact product of the rounded AWH and AHE. AWE is rounded to the nearest cent ($AWE = AWH \times AHE$).

FOOTNOTES: Use footnotes to indicate the following:

- . noncomparability
- . special revisions or corrections
- . shifts to a more recent benchmark
- . unpublishable series
- . other such explanations

Indicate footnotes in the data columns with an asterisk or a similar symbol. Using letters or numbers as footnotes in these columns may confuse a keypunch operator and result in mispunched data. Provide footnote text on the back of the reporting form.

COMMENTS: Explain significant changes (or the absence of normally expected change) for all data whenever possible. Type such comments on the form provided for this purpose with an appropriate datatype code. Precede each comment with the appropriate series or SIC code. To eliminate unnecessary typing and to reduce confusion, the standard numeric economic comment codes are used in place of a text. See Appendix F.2 for a complete list of the economic comment codes.

TRANSMISSION: The originals of the completed forms must reach the appropriate BLS office (Washington or Regional as per arrangements) on or before the closing dates specified in Appendix H.2. This appendix is revised annually and distributed to the State agencies in the last quarter of the year preceding the reference year.

Use the address listed in Section 7.5.4 if the reports are being mailed to BLS-Washington.

EXHIBIT 7-D

Early transmission is highly desirable, as it helps to spread the workload in evaluating and compiling the estimates for release in the monthly BLS publications, the State and area news release and Employment and Earnings. It is neither necessary nor desirable to hold the completed reports for one geographic area until reports for all areas are ready for simultaneous transmission to BLS-Washington. If the preparation of hours and earnings estimates would delay the timely receipt of the employment estimates, then the employment estimates should be transmitted immediately. Transmit the hours and earnings estimates when they are completed. Please inform the Regional Office or BLS-Washington that estimates are incomplete and inform them of the anticipated arrival date of subsequent data.

RETENTION: The State copies of the reporting forms may be destroyed on a two year cycle, but no sooner than the next benchmark adjustment, provided that the State agency has established satisfactory permanent records of the latest monthly data and annual averages for each series for the entire period since the beginning of each series.

HISTORICAL RECORDS: The State agency should post estimates for the current and previous months as they become available from the BLS 790 Monthly Report on Employment, Hours, and Earnings (SO-235) to the annual form, Report on Employment, Hours and Earnings (SO-235). The annual forms will then serve as a record of the preliminary and revised monthly estimates until they are revised to a later benchmark. These forms may be used during the benchmark revision and validation cycles.

B. BLS Monthly Report on Employment, Hours, and Earnings (SO-235)

USE: This report is used to report the monthly State and area estimates for employment, hours, and earnings for States and areas. This form is also used when Annual Averages are reported independent of benchmark revisions.

TIME PERIODS REPORTED: Monthly Data are to be included for the two times indicated below:

- . current month (preliminary estimate)
- . previous month (final estimate)

Annual averages, when reported on this form, are reported as month 13, and data are entered in current month column.

DATA: Both employment and hours and earnings data may be reported on the same schedule or may be separated. However, AWH, AWH and AHE must appear on the same reporting form.

EXHIBIT 7-D

C. BLS Monthly Report on Employment, Hours, and Earnings - Comment Form (SO-235C)

USE: Submit comments on any State and area data reported on the Monthly Report on Employment, Hours, and Earnings (SO-235C).

TIME PERIODS COMMENTED ON: Comment on any datatypes reported on the monthly data reporting form. Comment on either the current or the previous month's data.

COMMENT CODES: Use any comment numbered 1-49 from the complete list of comment codes in Appendix F.2.

D. BLS Annual Report on Employment, Hours and Earnings (SO-234)

USE: The report on Employment, Hours, and Earnings is to be used to submit data for several months including the annual benchmark revision and annual averages. You may submit only one datatype per sheet. These forms are used when:

- . new benchmark levels are introduced
- . series are corrected for interbenchmark periods
- . the previous year's data or several back months of data are submitted for a new series.
- . other revisions of data that occur involving a time span of more than one month.

Use a separate form for each different datatype reported, even though data may not be available for all months in the year. Do Not Use for the submission of regular monthly estimates.

TIME PERIODS REPORTED: For benchmark revisions, report data for all employment series beginning with January of the preceding benchmark period and continuing through the latest postbenchmark month for which revised estimates have been reported as final monthly estimates.

If it is necessary to adjust estimates for periods earlier than the previous benchmark, report only the series affected.

For any particular series, submit reports simultaneously for all years for which data must be reported.

All twelve months of data plus the annual average must be submitted if any time period is affected by a revision.

EXHIBIT 7-D

DATA: All employment series must be submitted for the revision period.

Only those hours and earnings series affected by the revision need be submitted on the SO-234. All hours and earnings data types for those series must be submitted (AWE, AWH, AHE, and AWOH).

Annual averages must be included on the forms if twelve months of data are submitted.

E. BLS Annual Report on Employment, Hours and Earnings - Comment Form (SO-234C)

USE: Submit comments to any data item included on the BLS Annual Report on Employment, Hours, and Earnings.

TIME PERIOD COMMENTED ON: Report comments on the data for any month included on the annual reporting form.

COMMENT CODES: Use any comment, numbered 1-49, from the complete list of comment codes in Appendix F.2.

F. Annual Averages

Annual averages for all employment, hours, and earnings series for which estimates were reported monthly during the preceding calendar year must be sent to BLS so that they reach Washington on or before the closing dates specified by BLS. Annual averages may be submitted on the annual forms along with twelve months of data or may be submitted separately on the monthly form (i.e., for hours and earnings series for which there was no benchmark revision.) The annual averages are referred to as month "13".

Enter these annual averages in the columns normally used for current month data. In the heading of these columns, cross out the words, "Curr. Mo." and enter the abbreviation, "A.A.," in the space provided for the month, and indicate the year. In the space for entering the month and year in the heading of the form, enter the complete words, "Annual Averages", and also enter the year. All other spaces in the heading should be completed as when monthly data are reported.

Retain the State agency's copies of annual averages on monthly reporting forms for three months after the originals have been sent to BLS-Washington.

Section 8: ESTIMATING EMPLOYMENT

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Section 8: ESTIMATING EMPLOYMENT8.1 INTRODUCTION AND OVERVIEW8.1.1 Introduction

Use the estimating procedures in Section 8 to approximate the month-to-month trends of all employees (AE), women workers (WW), and production workers (PW) for each industry. Once such trends are determined each month, use them to obtain the new employment levels. The procedures in Section 8 are designed to be used at the national, State, and area levels.

Sections 8.1.2, 8.2, 8.3, and 8.4 show how to prepare estimates for cells that have adequate reporting samples (see Section 3: Sampling). They also cover the adjustment of employment estimates for establishment births and for atypical employment microdata.

Section 8.5 provides general methods for preparing estimates of current employment when the sample for a basic estimating cell is either inadequate or nonexistent. Sections 8.6 and 8.7 provide special estimating instructions for certain employment series and cover the preparation of annual averages for employment series.

The procedures provided in Section 8 are for use in all States, whether they are performed manually or by other means. They are readily adaptable to computer programs. In addition, many procedures are easily done using programmable calculators or microcomputers.

Throughout Section 8, the term "production workers" refers to all of the following unless otherwise noted:

- . production workers: mining and manufacturing
- . construction workers: construction
- . nonsupervisory employees: other nonmanufacturing

8.1.2 OverviewA. Estimating Procedures and Monthly Revisions of Employment Estimates

One basic procedure is available to compute current all employee (AE) estimates each month for industries with adequate samples. Another basic procedure is available to compute current women worker (WW) and production worker (PW) estimates each month. Both basic procedures are used at all levels: national, State, and area.

The basic procedure for estimating all employees (AE) is called the link relative technique. It assumes that changes in sample data trends indicate comparable changes in universe data trends. First, determine the all employee (AE) benchmarks, setting the level of all employees for each basic cell. (See Sections 10 and 11) Then compute the current all employee (AE) estimates using link relatives to determine the changes each month. This process continues until new benchmarks become available, then adjust the estimates again to new benchmark levels and begin the process anew.

Compute all employee (AE) link relatives for each processing cycle for each basic estimating cell. To derive an all employee link relative, divide the all employee total for the current month of the current matched sample by the all employee total for the previous month of the current matched sample.

The current matched sample for all employees consists of current reports that have passed certain editing and screening tests (see Section 6) and reported all employees for both the previous month and the current month.

A new monthly estimate of all employees (AE) for a basic cell is computed by multiplying the all employee estimate for the previous month by the current link relative. In certain basic cells the link relative is first multiplied by a bias adjustment factor in order to correct for the underrepresentation of establishment births and other biases in the sample. (See Sec. 8.3.)

The first employment estimates computed for the current month are preliminary figures based on the initial summary of the employment microdata in the current matched sample. Shortly before computing the preliminary employment estimates for the current month, obtain more complete matched sample totals for the previous month.

Using these augmented matched sample totals, compute new link relatives for the previous month and use them to determine the revised estimates for the previous month. Multiply the revised estimates of all employees (AE) for the previous month by the preliminary link relatives for the current month.

Compute current estimates of women workers (WW) and production workers using the estimated ratios of women workers and production workers to all employees (WW/AE, PW/AE). It is assumed that the ratios of women workers and production workers to all employees in the sample are the same for the universe.

Determine the women worker (WW) and production worker (PW) estimates for the current month by computing the current women worker and production worker estimated ratios and then multiplying the all employee (AE) estimate for the current month by the current estimated ratios.

Use modifications of the basic procedures for estimating employment (AE, WW, PW) in order to prevent distorted estimates when some of the microdata are determined to be atypical, i.e., when certain microdata show a markedly different trend from other reports' microdata in a cell's matched sample and the trend is not representative of the microdata of other reports in the cell that are not part of the matched sample.

Revisions of employment estimates done since the last benchmark revision for any months preceding the previous month are called "interim revisions." They are usually not introduced into the published series until the next adjustment of the estimates to new benchmark levels. However, they are normally used in the recomputation of the subsequent estimates. Publish interim revisions of employment estimates on a current basis when a revised estimate differs from an earlier one by five percent (5%) or more, but not less than 100 employees, at any published level. This is usually done in a footnote.

B. Tabulations

At a minimum, each State is to produce a tabulation of the current matched sample showing, for each basic cell, the sample totals for the previous and current months for:

- . all employees (ae)
- . women workers (ww)
- . production workers (pw)
- . payroll (pr)
- . worker-hours (wh)
- . overtime worker-hours (otwh) -- for manufacturing cells only

In addition, each State is to produce a listing of the individual sample reports (microdata) by report number within each basic cell showing the data reported for both the previous and current months. Also show comment codes on this listing.

Each State also is to produce a third tabulation that lists late reporters by report number within each basic cell. Also show the data reported for the previous month on this tabulation for each late reporter so that important missing reports can be easily identified.

It is helpful to produce a tabulation showing analytical data for each basic and summary cell. This information is useful in analyzing current data trends. For each data type show: (1) estimates for the current month, the previous month, and a year ago, (2) the change over the month, and (3) the change over the year.

States are encouraged to model their tabulations after those produced at BLS-Washington. Samples of these tabulations are available on request.

C. Key Reports

Each State is to maintain lists of important (key) reports for the State and area(s). The States are to review the tabulations of microdata to determine if any key reports are missing. Special efforts are to be made to obtain the data for missing key reports.

A list of key reports required at the National level is sent to the States periodically (see Appendix D). The States must make every effort to obtain the data from these reporters in time for the National first closings. All National key reports must be received at BLS-Washington by the National third closing date specified for the data month involved, if at all possible.

8.2 ESTIMATING CURRENT EMPLOYMENT -- ALL EMPLOYEES, WOMEN WORKERS, AND PRODUCTION WORKERS

8.2.1 Estimating All Employees (AE)

A. Basic Cells

A "basic" cell is a cell at the lowest level for which estimates are prepared. The formula used to compute estimates of all employees for basic cells with adequate samples is:

$$AEc = (L)(Fc)(AEp) \text{ or } (aec/aep)(Fc)(AEp)$$

Where:

AEc = the estimate of all employees for the current month

AEp = the estimate of all employees for the previous month

L = the current link relative

Fc = the bias adjustment factor for the current month (if there is no adjustment for bias, Fc = 1.0000; Fc is to be rounded to four (4) decimal places)

The link relative is computed as follows:

$$L = aec/aep$$

Where:

aec = the all employee total for the current month of the current matched sample

aep = the all employee total for the previous month of the current matched sample

The link relative (L) is rounded to 4, 5, or 6 decimal places. Four (4) places will be sufficient for most States. However, some States may find that 5 or 6 decimal places are necessary to obtain accurate estimates in some cells.

NOTE: The current matched sample totals include only those reports that passed certain editing and screening criteria and reported all employees for both the previous month and the current month.

Example for AE:

Given Data

Estimate: AEp = 17,538

Matched Sample Data: aep = 8,012 aec = 8,666

Bias Adjustment Factor: Fc = 1.0030

$$\begin{aligned} AEc &= (aec/aep)(Fc)(AEp) \\ &= (8,666/8,012)(1.0030)(17,538) \\ &= (1.0816)(1.0030)(17,538) \\ &= (1.0848)(17,538) \end{aligned}$$

$$AEc = 19,025 = \underline{19.0}$$

B. Summary Cells

Summary cells are combinations of basic estimating cells and/or other summary cells. Compute the estimates of all employees for summary cells as follows:

$$AEs = AE1 + AE2 + AE3 + \dots + AEn$$

Where:

AEs = the estimate of all employees for a summary cell = the sum of the estimates of all employees for the component cells up to and including the nth cell

8.2.2 Estimating Women Workers (WW) and Production Workers (PW)**A. Basic Cells**

Compute women workers (WW) and production workers (PW) using the same method for each as shown below. Use the term "XW" to indicate "WW" when working with women worker series and "PW" when working with production worker series.

Estimates of women workers (WW) and production workers (PW) for the current month depend upon three factors:

1. the corresponding all employee (AE) estimate for the current month
2. the corresponding estimated ratios of women workers and production workers to all employees (WW/AE, PW/AE)
3. the corresponding sample ratios of women workers and production workers to all employees (ww/ae, pw/ae)

The formula used to compute the estimated XW/AE ratios uses data for both the current month and the previous month in order to enhance the continuity of the estimated ratios. The procedure embodied in the formula is called the difference link and tapers technique, i.e.:

. Difference Link: $[(xw/ae)_c - (xw/ae)_p]$

. Tapers: $[<A> \cdot (XW/AE)_p] + [\cdot (xw/ae)_p]$

This technique has certain advantages, such as:

1. It uses matched sample data.
2. It tapers the estimated ratio for the previous month, $(XW/AE)_p$, towards the sample ratio for the previous month of the current matched sample, $(xw/ae)_p$.

3. The weights, alpha (<A>) and beta (), promote continuity by heavily favoring the estimated ratio for the previous month, (XW/AE)_p. This helps to minimize the need to use the wedging procedure described in Sec. 8.2.2.C.

The choice of values for alpha and beta is based on empirical observation and may be changed at the discretion of the analyst, especially if there is reason to suspect the accuracy of the estimated ratio for the previous month. The sum of alpha and beta is one, i.e., <A> + = 1. A value of 0.9 is normally chosen for alpha in order to keep the estimated ratio for the current month reasonably close to the estimated ratio for the previous month, thus helping to minimize large fluctuations from month to month. Beta, therefore, is normally 0.1.

If the estimated ratio for the previous month and the current sample's sample ratio for the previous month differ by more than three percent (3%) in the same direction for three (3) consecutive months, it may be helpful to change the weights to 0.8 for alpha and 0.2 for beta. The weights may be varied in the construction industry depending upon the time of year.

Example for XW:

Given Data

<u>Estimates:</u>	XW _p = 14,175	
	AE _p = 17,538	AE _c = 19,025
<u>Matched Sample Data:</u>	xw _p = 6,430	xw _c = 7,015
	aep = 8,012	aec = 8,666
<u>Constants:</u>	<A> = 0.9	 = 0.1

$$\begin{aligned}
 (XW/AE)_c &= [<A> \cdot (XW/AE)_p] + [\cdot (xw/ae)_p] \\
 &\quad + [(xw/ae)_c - (xw/ae)_p] \\
 &= [(.9)(14,175/17,538)] + [(.1)(6,430/8,012)] \\
 &\quad + [(7,015/8,666) - (6,430/8,012)] \\
 &= [(.9)(.8082)] + [(.1)(.8025)] \\
 &\quad + [.8095 - .8025] \\
 &= .7274 + .0803 + .0070
 \end{aligned}$$

$$(XW/AE)_c = .8147$$

$$XW_c = (AE_c) (XW/AE)_c = (19,025) (.8147)$$

$$XW_c = 15,500 = \underline{15.5}$$

The formula used to compute women worker or production worker estimates for basic cells is:

$$XWc = (AEC)(XW/AE)c$$

Where:

XWc = the estimate of women workers or production workers for the current month

AEC = the estimate of all employees for the current month

$(XW/AE)c$ = the estimated ratio of women workers or production workers to all employees for the current month

The estimated ratio of women workers or production workers to all employees for the current month is computed as follows:

$$(XW/AE)c = [<A> \cdot (XW/AE)p] + [\cdot (xw/ae)p] \\ + [(xw/ae)c - (xw/ae)p]$$

Where:

$(XW/AE)c$ = the estimated ratio of women workers or production workers to all employees for the current month

$(XW/AE)p$ = the estimated ratio of women workers or production workers to all employees for the previous month

$<A>$ = Alpha, a value set between 0 and 1, inclusive, usually designated as 0.9

$$ = Beta, a value equal to $1 - <A>$, usually equal to 0.1

$(xw/ae)p$ = the ratio of women workers or production workers to all employees for the previous month of the current matched sample

$(xw/ae)c$ = the ratio of women workers or production workers to all employees for the current month of the current matched sample

The ratios (XW/AE) are rounded to four (4) decimal places.

NOTE: The formulas used to compute the estimated ratios of women workers or production workers to all employees (WW/AE , PW/AE) are comparable to those used to compute estimates of average weekly hours, average hourly earnings, and average weekly overtime hours (AWH , AHE , $AWOH$).

B. Summary Cells

Compute the estimates of women workers (WW) or production workers (PW) for a summary cell as follows:

$$XWs = XW1 + XW2 + XW3 + \dots + XWn$$

Where:

XWs = the estimate of women workers or production workers for a summary cell
= the sum of the estimates of women workers or production workers for the component cells up to and including the nth cell

C. Wedging Ratios of Women Workers and Production Workers to All Employees at "Final" Closings

Review "final" closing estimates each month to see if any basic cells have estimated women worker or production worker ratios (XW/AE) meeting the following criteria:

1. The difference between the sample ratio and the estimated ratio for the current month exceeds three percent (3%), i.e.,

$$([(xw/ae)_c - (XW/AE)_c] / [xw/ae]_c) (100) > 3\%$$

NOTE: Base the sample ratio (xw/ae) on all useable sample reports, both typical and atypical. The estimated ratio (XW/AE) is to be the one obtained after adjusting for any atypical employment microdata.

2. Such differences have occurred in the same direction for three (3) consecutive months, i.e., the current month and the two prior months.

If these criteria are met, it is necessary to decrease the differences over a period of months (usually 3) using a wedging procedure (see below) until the difference between the sample ratio and the estimated ratio is less than one percent (1%). **Exception:** If an authentic economic event occurs (e.g., a large establishment's death), the change should be reflected in the estimates as close as possible to the time of occurrence. Wedging is not performed in this case.

Wedging Procedure:

1. Review the sample ratios (xw/ae) and the estimated ratios (XW/AE) for the current month for each basic cell and note any differences exceeding three percent (3%).

2. Record the following for cells with differences exceeding three percent (3%):

- . the Cell-ID
- . the Data Type (WW/AE or PW/AE)
- . the Sample Ratio (xw/ae)
- . the Estimated Ratio (XW/AE)
- . the Difference, $(xw/ae) - (XW/AE)$ -- be careful to include the plus (+) or minus (-) sign
- . the Percent Difference, $\left[\frac{(xw/ae) - (XW/AE)}{(xw/ae)} \right] [100]$ -- be careful to include the plus (+) or minus (-) sign

3. Determine if this is the third consecutive month with a difference exceeding three percent (3%) in the same direction. If so, record the following for each basic cell and data type (WW/AE or PW/AE) involved, for the current month, and for the two months preceding it:

- . the sample ratio (xw/ae)
- . the estimated ratio (XW/AE)
- . the difference, $(xw/ae) - (XW/AE)$
- . the total of the three differences
- . the average of the three differences
- . the wedge, usually the average difference divided by three (the first-month wedge)
- . The revised estimated ratio (the wedge is added to, or subtracted from, the original estimated ratio for the current month in order to bring it closer to the sample ratio)

If the difference in the fourth month is less than one percent (1%), the wedging procedure is not continued. However, if the difference between the sample ratio and the estimated ratio is one percent (1%) or greater in the fourth month (now the current month), the wedging procedure is continued as follows. Compute the average difference for the three (3) most recent months using the revised estimated ratio for the previous

month computed using the first-month wedge and divide it by two (2) to obtain the second-month wedge; apply it to the fourth month's estimated ratio in order to bring it closer to the sample ratio and form the revised estimated ratio for the fourth month. If the difference is still one percent or greater after the first-month wedge is applied, continue the wedging procedure each month until a difference of less than one percent (1%) is achieved.

If the difference in the fifth month is less than one percent (1%), the wedging procedure is not continued. However, if the difference between the sample ratio and the estimated ratio is one percent (1%) or greater in the fifth month (now the current month), the wedging procedure is continued as follows: Compute the average difference for the three (3) most recent months using the revised estimated ratio for the previous month computed using the second-month wedge; use the entire amount of the average difference as the third-month wedge; apply it to the fifth month's estimated ratio in order to bring it closer to the sample ratio and form the revised estimated ratio for the fifth month.

If a calculated wedge should exceed the sample ratio by going above it in an upward wedge, or by going below it in a downward wedge, use the sample ratio as the revised estimated ratio for the current month.

Although three-month wedges are normally used, it may be desirable at times to wedge a very large difference (10 percent or greater) over a longer period. If this is the case, the procedures above are adjusted accordingly.

For example, if a five-month wedge were desired, the wedges would be determined as follows:

<u>Wedge Type</u>	<u>Consecutive Month:</u>	<u>Wedge (Avg. Diff. divided by:)</u>
1st-month wedge	3rd	5
2nd-month wedge	4th	4
3rd-month wedge	5th	3
4th-month wedge	6th	2
5th-month wedge	7th	1

Enter on the worksheet for the current month whether a wedge is a first-month wedge, a second-month wedge, etc; also enter the period for which the estimate is being wedged.

Example of Wedge Computation (XW/AE)

Month:	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>
S. ratio = (xw/ae)	.812	.819	.808	.811	.816	.813
E. ratio = (XW/AE)	.864	.873	.859	.842	.826	
Rev. E. Ratio = (XW/AE)*			.842	.822	.816	
Diff. = (xw/ae) - (XW/AE)	-.052	-.054	-.051	-.031	-.010	0
Rev. Diff. = (xw/ae) - (XW/AE)*			-.034	-.011	0	
% Diff. = $\frac{(xw/ae) - (XW/AE)}{(xw/ae)} \times 100$	-6.4%	-6.6%	-6.3%	-3.8%	-1.2%	0%
Rev. % Diff. = $\frac{(xw/ae) - (XW/AE)^*}{(xw/ae)} \times 100$			-4.2%	-1.4%	0%	

First-month Wedge:

$$(-.052) + (-.054) + (-.051) = -.157 \text{ (Total of Differences)}$$

$$-.157/3 = -.052 \text{ (Average Difference)}$$

$$-.052/3 = -.017 \text{ (First-month wedge)}$$

$$.859 - .017 = \underline{.842} \text{ (Revised estimated ratio)}$$

Second-month Wedge:

$$(-.054) + (-.034) + (-.031) = -.119$$

$$-.119/3 = -.040$$

$$-.040/2 = -.020$$

$$.842 - .020 = \underline{.822}$$

Third-month Wedge:

$$(-.034) + (-.011) + (-.010) = -.055$$

$$-.055/3 = -.018$$

$$.826 - .018 = (.808)$$

NOTE: The result (.808) is not used as the revised estimated ratio for the fifth month since it overshoots the sample ratio; the revised estimated ratio for the fifth month is made equal to the sample ratio (.816).

A fourth-month wedge is unnecessary in this example, since the difference between the sample ratio and the revised estimated ratio in the fifth month is less than 1 percent. (The ratios and differences are rounded to three decimal places here for illustrative purposes only.)

This procedure may be done manually using worksheets and a calculator, or the worksheets may be eliminated by using a computer-produced tabulation supplemented with manual entries.

Use the first worksheet (see Exhibit 8-A) to post or compute the following for each basic cell for each month for a year:

. Cell-ID

For WW/AE:

. Sample Ratio	. Estimated Ratio
. Difference	. Percent Difference

For PW/AE:

. Sample Ratio	. Estimated Ratio
. Difference	. Percent Difference

Use the second worksheet (see Exhibit 8-B) to compute the following for each basic cell being wedged:

- . the total of the differences
- . the average of the differences
- . the wedge
- . the revised estimated ratio

If a computer-produced tabulation is used, it must show the following for each basic cell for the current month and for the two prior months. (See Exhibit 8-C.)

- . Month
- . Year
- . Closing (Final)
- . Cell-ID
- . Data Type (WW/AE or PW/AE)
- . Sample Ratio (xw/ae)
- . Estimated Ratio (XW/AE)
- . Difference (+ or -)
- . Percent Difference
- . Over 3 Percent Indicator (*), for first-month wedges
- . 1 Percent or Greater Indicator (**) for succeeding-month wedges

This tabulation allows easy identification of basic cells with differences exceeding three percent (3%) in the same direction for first-month wedges and with differences of one percent (1%) or greater for succeeding-month wedges. The status of other cells can easily be reviewed also. This tabulation may be used as follows to avoid the use of separate worksheets:

1. Check notations on the tabulations for the two (2) preceding months and record in the appropriate place on the current tabulation any wedges performed then. Indicate the type of wedge in each case (first-month, second-month, etc.).
2. Locate those cases where an asterisk (*) or a manual notation of a previous wedge appears for all three (3) months shown. (The manual notation is equivalent to an asterisk in that it indicates a past or present difference exceeding three percent (3%) for a first-month wedge or one percent (1%) or greater for succeeding-month wedges. In the case of the manual notation, such a difference existed prior to wedging even if it does not at present.)
3. Eliminate any cases where the differences are not in the same direction.
4. Make any nonwedging modifications to the tabulation which may be necessary because of the deletion, addition, correction, or atypical treatment of microdata.
5. Compute the wedges of various types on the tabulation; enter the results on it also.
6. Record the revised estimates on the tabulation.
7. Update the current ratios, as needed, to produce continuous series.

D. Permanent Breaks in CES Series

Permanent breaks in CES series are caused by the following: (1) a major change in an industry's definition (SIC revision), (2) the permanent loss of a major reporter from the sample, and (3) a major error in the coding of an industry or area. Series that have experienced a permanent break exceeding three percent (3%) during the year are reviewed at benchmark time. If the remaining sample in those series is not reflective of the universe characteristics, the series must be broken.

8.3 ADJUSTING EMPLOYMENT ESTIMATES FOR THE BIRTHS OF NONSAMPLE ESTABLISHMENTS

8.3.1 Introduction

CES all employee estimates often tend to be low relative to their new benchmark levels. The principal reasons for this are: (1) the inability of the survey to capture establishment births on a current basis, (2) the lack of adequate and representative samples, and (3) the lack of adequate and proper size stratification of all employees.

Establishment births. In our dynamic economy new establishments are continually beginning operations, while others are permanently ceasing operations. The CES sample may capture deaths among its members, however establishment births occurring during the postbenchmark period are not likely to be reflected in the estimates. The initial period of typically rapid growth of new establishments is not captured by the survey because of the long period between their birth and their inclusion in the UI counts or in the CES survey. This often leads to a downward bias in the estimates, especially during the recovery segment of the business cycle.

Sample adequacy and representativeness. Many reporters have been participating in the CES survey for years. Since they tend to be more stable than new establishments, they may not be representative of an industry as a whole. Some studies indicate that small establishments contribute a disproportionate share of the new jobs created by the economy. Thus failing to include a representative selection of the new and smaller establishments may contribute to a downward bias in the estimates.

Size stratification. The stratification of employment by size would partially compensate for the less than proportional representation of small establishments in the CES sample by estimating the employment levels separately for each size class. However, at the level of industry detail published by most States, the samples are usually too small to support the type of size stratification that would be required. At present, the CES size stratification procedures emphasize the quality of the hours and earnings estimates, rather than the quality of the employment estimates. The inability or failure to stratify the employment estimates leads to bias in these estimates. If in fact small establishments do grow faster, then the bias will be downward.

The remainder of Sec. 8.3 covers the development and use of bias adjustment factors as a means of reducing the downward bias in the all employee estimates. Since construction, trade, and services industries tend to have particularly high rates of establishment births, they are more likely to require the use of bias adjustment factors than industries in other divisions.

A bias adjustment factor is multiplied times the all employee (AE) estimate in order to correct the underrepresentation of establishment births and other biases in the sample. Bias adjustment factors are derived for and applied to all employee series only. Properly adjusted estimates of women workers (WW) and production workers (PW) are obtained by multiplying the all employee (AE) estimates by the WW/AE and PW/AE estimated ratios.

8.3.2 General Procedures

When monthly estimates of all employees (AE) are first prepared for an industry that appears to need adjustment for establishment births, use a preliminary bias adjustment factor. If an industry is consistently revised upward in the annual benchmark revisions, a bias adjustment factor is probably needed. Use the national bias adjustment factor for the industry involved on an interim basis. These factors are shown in Appendix K. After estimates have been prepared for an interim benchmark period, new bias adjustment factors may be developed that more accurately reflect the establishment births in a State or area. Use an average of at least three (3) consecutive previous benchmark comparisons to determine a new bias adjustment factor. At each benchmark revision period thereafter, re-examine and revise when necessary the bias adjustment factors.

8.3.3 Deriving Bias Adjustment Factors

1. Compute the estimate of all employees (AE) for March of the new benchmark period assuming that no adjustments were made for establishment births.

Example:

Estimate of all employees (AE) for March, including adjustments = 10,585.

Monthly bias adjustment factor used since the preceding April = 1.0040.

Total amount of adjustment (April - March) = $12 \times .0040 = .0480$.

"Basic" estimate of all employees for March, not including adjustments = $10,585 / 1.0480 = 10,100$.

NOTE: The amount of adjustment accumulated over the twelve-month period is computed by multiplying the decimal portion of the monthly adjustment used by twelve (12) and adding the result to 1.0000. (In this case, $0.0040 \times 12 = 0.0480$, and $1.0000 + 0.0480 = 1.0480$.) The twelve months used are the months beginning with the April following the last benchmark month through March, the new benchmark month. If no bias adjustment factor has been used in the previous year or the factor = 1.0000, the March estimate does not need to be adjusted as above.

2. Adjust the new March benchmark to eliminate the effect that industry classification changes had in establishing the new benchmark level. This procedure includes:

(1) excluding the first-of-the-year industry classification changes that had been made to the ES-202 (or special benchmark tabulation) data.

(2) eliminating the CES industry classification changes introduced into the new benchmark that had not also been introduced into the last benchmark.

3. Divide the "adjusted" benchmark figure obtained in Step 2 by the "basic" CES estimate obtained in Step 1.

For example, if the "adjusted" benchmark for March = 10,680, then the ratio between the "adjusted" benchmark and the "basic" CES estimate = $10,680 / 10,100 = 1.0574$ (i.e., the estimate was understated by 5.74 percent over the year).

4. Apply this procedure (steps 1 through 3) to each of the two years prior to the new benchmark period. The resultant annual bias adjustment factors are then averaged.

Example:

Bias factor for the benchmark year = 1.0574

Bias factor for the year prior to benchmark year = 1.0490

Bias factor for the year two years prior to benchmark year = 1.0450

$$\frac{1.0574 + 1.0490 + 1.0450}{3} = 3.1514/3 = \underline{1.0505}$$

5. If the ratio determined in Step 4 is less than 1.0060 (i.e., if the "adjusted" benchmark figure is not at least 0.6 percent greater than the "basic" CES estimate), then no bias adjustment factor is necessary when computing estimates during the postbenchmark period, or a factor of 1.0000 may be used.

(In this case, when the series is re-examined at the next benchmark revision period, Step 1 will not apply and the comparison in Step 3 will be between the CES estimate and the "adjusted" benchmark figure.)

If the ratio determined in Step 4 is 1.0060 or more, subtract 1.0000 and divide the result by twelve (12) -- the number of months in the period during which the adjustment has accumulated in the estimates, i.e., April through March. The result is a new monthly bias adjustment factor for the cell.

Example:

Annual Bias Adjustment Factor = 1.0505

New Monthly Bias Adjustment Factor = $[(1.0505 - 1.0000)/12] + 1.0000 =$
 $(.0505/12) + 1.0000 = .0042 + 1.0000 = \underline{1.0042}$

8.3.4 Refining Bias Adjustment Factors Using Regression Models

Beginning with the March 1983 national benchmark revision, BLS instituted a procedure to refine the national three-year-average bias adjustment factors (see Sec. 8.3.3) to obtain better factors that reflect recent economic conditions. This procedure involves the use of regression models.

Correlation analysis performed by BLS-Washington has shown that the amount of bias in an employment series is related to two factors: (1) the rate of employment growth, and (2) the percent sample coverage (i.e., the ratio of the number of sample units divided by the number of universe units, expressed as a percentage). The amount of bias is high when: (1) the rate of employment growth is high, and/or (2) the percent sample coverage is low. A cross-sectional regression model was developed using data for more than 300 three and four digit industries. The rate of employment growth and the percent sample coverage were used as the determining variables. These two variables explained about half of the variance in the benchmark revisions or "bias."

Models have now been developed at the national level for each industry division and certain other broad industry groups. Use these models to adjust the national three-year-average bias factors. A growth-adjusted bias factor for the current calendar quarter is an estimate of the three-year-average bias plus the difference between the annualized growth over the previous quarter and the growth over the period used to obtain the average bias, times a factor, X , estimated by regression.

The national bias adjustment factors for the current quarter are located in Appendix K.

Details of the procedure involving regression models may be obtained from the Division of Monthly Industry Employment Statistics (DMIES) at BLS-Washington. A State may arrange to receive this information by contacting its BLS regional office. The States are urged to seriously consider adopting this approach, especially those having significant problems with bias (i.e., large benchmark revisions).

8.3.5 Using Bias Adjustment Factors When Computing Current Estimates of All Employees (AE)

Use a bias adjustment factor each month to adjust the link relative for selected cells (see exception below). For example, if the bias adjustment factor is 1.0048 and the link relative is 1.0215, then the modified link relative is 1.0264 (1.0048×1.0215). Apply bias adjustment factors only in basic estimating cells.

Do not use a bias adjustment factor that is less than 1/20 percent (0.0005) per month. Monthly bias adjustment factors greater than 1.0100 may be perfectly reasonable for some State and area series that are consistently far below benchmark levels, even though bias adjustment factors of this magnitude are not currently used in the national estimating process. However, care must be used when such large bias adjustment factors are used because of the large impact they have on the estimates.

If the difference between a newly-computed bias adjustment factor and the comparable one currently in use is large, examine the new factor carefully. The change in the factor might have been caused by divergent trends in the UI data as compared with the CES series in one or two months. In such cases, replace the CES change(s) for the month(s) in question by the UI change(s) in the basic series and the bias adjustment factor is recomputed.

Further, even if the difference between the new bias adjustment factor and the current bias adjustment factor appears to be caused by a change in the rate of establishment births, this may be the result of unique conditions during the year over which the factor was computed. Under such circumstances, it may be preferable either not to revise the bias adjustment factor or to use a revised factor midway between the current factor and the new factor. This is true particularly in years with economic peaks and troughs when small firms are volatile.

For example, if the new bias adjustment factor for a cell is 1.0020 and the current one is 1.0012, then the factor to be used when preparing the estimates would be: $(1.0020 + 1.0012)/2 = 1.0016$. This method is used when the bias adjustment factors used in recent years have shown little variation.

8.3.6 Variable Bias Adjustment Factors

In highly seasonal industries and industries containing many establishments operating only part of each year, it may be desirable to use variable bias adjustment factors when the sample and the regular bias adjustment factors have not been producing satisfactory all employee (AE) estimates. Basically, a variable bias adjustment factor is a regular bias adjustment factor adjusted each month for seasonality.

Examples of industries where these factors may be needed are: Eating and Drinking Places (SIC 58), Hotels and Other Lodging Places (SIC 70), Amusement and Recreation Services (SIC 79), and Construction.

Compute variable bias adjustment factors as follows:

1. Derive the regular bias adjustment factor for the basic cell involved. (See Secs. 8.3.3 and 8.3.4.)
2. Derive the monthly seasonal correction factors for the cell. (See below.)
3. Multiply each monthly seasonal correction factor by the regular bias adjustment factor for the cell.

Compute the monthly seasonal correction factors (see Step 2) as follows. (See Exhibit 8-D.)

1. For each month of the three (3) most recent calendar years, divide the benchmark all employee figure by the CES all employee estimate. Use the CES data computed before the adjustment to the benchmark for the following year.
2. Average the ratios computed in Step 1 for January of each year, February of each year, ..., and December of each year.
3. Link the average ratios computed in Step 2, i.e., divide each ratio by the previous ratio. The resulting figures are the monthly seasonal correction factors needed to compute the variable bias adjustment factors for the cell.

Use the variable bias adjustment factors in place of, and in the same manner as, the regular bias adjustment factors, when computing the current all employee (AE) estimates. (See Sec. 8.3.5.)

8.4 ESTIMATING EMPLOYMENT WHEN SOME EMPLOYMENT MICRODATA ARE TREATED ATYPICALLY

8.4.1 Identifying Reports That Have Atypical Employment Data

Employment data for a report showing a trend in employment markedly different from the trends of the other reports in either a cell's matched sample or nonsample establishments are considered to be atypical. Doubtful cases are not considered to be atypical.

Reports may be noted during the editing process that might be considered to have atypical employment data. A reporter's comments may be of help in making this determination. After the current estimates have been

prepared, review each cell in order to determine whether the estimates appear to be reasonable. If not, review the sample data of the basic cells involved in order to determine whether there are any reports with atypical employment data in addition to any noted during the editing process that proved to contain atypical data.

Special treatment of atypical microdata in a cell may be necessary in order to prevent distorted estimates. Atypical treatment of employment data for small reports usually has little effect on the estimates. Reports that dominate an industry are usually placed in a separate basic cell. Examination and adjustment for atypicality must always be done at the basic cell level.

No one procedure will always lead to a correct determination of whether the employment data for a specific report are atypical. However, the following should be helpful in determining if atypical treatment is necessary.

1. When the sample for a basic cell contains two-thirds (2/3) or more of the employment in the cell, an atypical adjustment is usually not necessary. When the sample coverage is substantial, the difference between an estimate computed using the regular procedure and an estimate computed with an adjustment for atypical data is usually small.

2. Atypical adjustments must not be made merely to prevent large fluctuations in employment estimates; such fluctuations may reflect the actual trends in a cell. However, if the employment change from month to month for a relatively stable industry is more than five percent (5%) excluding seasonal variation, and sample coverage is low, review the trends of employment data in the reports in the matched sample and determine the need for an atypical adjustment.

3. When atypical adjustment is necessary because of a temporary change in a reporter's employment level, e.g., a strike, or a strike return, make atypical adjustments for each succeeding month up through the month in which the reporter's employment level returns to normal.

NOTE: Industrywide strikes within a State or area are not to be treated atypically; the regular estimating method is to be used. However, if the total number of workers on strike is known, and the regular procedure fails to yield a reasonable estimate of employment, an adjustment for the total number of workers on strike is to be made.

4. Establish a separate basic cell for an industry with month-to-month movements that normally differ from those in other industries in the same industry group, e.g., the seasonal canning and sugar industries in the food industry group. This decreases the need for atypical treatment. (This is an acceptable exception to the rule in Sec. 9.2.1.B.2 that each basic cell must contain at least fifteen (15) sample reports.)

8.4.2 Estimating Employment When Some Employment Microdata Are Treated AtypicallyA. Estimating All Employees (AE) When Some All Employee Microdata Are Treated Atypically

The formula used to compute the estimates of all employees (AE) for basic cells when some all employee microdata are treated atypically is:

$$AEC = [(La)(Fa)(AEp - aep') + aec'] \text{ or} \\ [([aec - aec']/[aep - aep'])(Fc)(AEp - aep')) + aec'$$

Where:

AEC = the estimate of all employees for the current month

AEp = the estimate of all employees for the previous month

aep' = the all employees for the previous month of the report(s) with atypical all employees

aec' = the all employees for the current month of the report(s) with atypical all employees

Fc = the bias adjustment factor for the current month (if there is no adjustment for bias, Fc= 1.0000; Fc is rounded to four (4) decimal places)

La = (aec - aec')/(aep - aep') = the adjusted link relative computed from the adjusted totals of the current matched sample (excluding the atypical all employee microdata); the link relative is rounded to 4, 5, or 6 decimal places. Four (4) places will be sufficient for most States. However, some States may find that 5 or 6 decimal places are necessary to obtain accurate estimates

aec = the all employee total for the current month of the current matched sample

aep = the all employee total for the previous month of the current matched sample

ExampleGiven Data

Estimates: AEp = 10,150
Matched Sample Totals: aep = 3,010 aec = 3,160
Atypical Totals: aep' = 503 aec' = 605
Bias Adjust. Factor: Fc = 1.0025

$$\begin{aligned} AEc &= [([aec - aec'] / [aep - aep']) (Fc) (AEp - aep')] + aec' \\ &= [(3,160 - 605) / (3,010 - 503) (1.0025) (10,150 - 503)] + 605 \\ &= [(2,555 / 2,507) (1.0025) (9,647)] + 605 \\ &= [(1.0191) (1.0025) (9,647)] + 605 \\ &\quad [(1.0216) (9,647)] + 605 \\ &= 9,855 + 605 \\ AEc &= 10,460 = \underline{10.5} \end{aligned}$$

B. Estimating Women Workers (WW) or Production Workers (PW) When Some Women Worker or Production Worker Microdata Are Treated Atypically

The formula used to compute estimates of women workers (WW) or production workers (PW) for basic cells when some women worker or production worker microdata are treated atypically is shown below. The term "XW" is used to indicate "WW" when working with women worker series and "PW" when working with production worker series.

$$XWc = [(AEC - aec')(XW/AE)c] + xwc'$$

Where:

XWc = the estimate of women workers or production workers for the current month

AEC = the estimate of all employees for the current month

xwc' = the women workers or production workers for the current month of the report(s) with atypical women workers or production workers

aec' = the total of all employees for the current month of the report(s) with atypical women workers or production workers (this figure corresponds to the women worker or production worker total for the current month of the atypical report(s), but this does not imply that the all employee figure is atypical)

$(XW/AE)c$ = the estimated ratio of women workers or production workers to all employees for the current month

The formula used to compute the estimated ratio of women workers or production workers to all employees for basic cells when some women worker or production worker microdata are treated atypically is shown below.

$$(XW/AE)c = [<A> \cdot (XW/AE)p] + [\cdot ([xwp - xwp'] / [aep - aep'])] + [([xwc - xwc'] / [aec - aec']) - ([xwp - xwp'] / [aep - aep'])]$$

Where:

$(XW/AE)c$ = the estimated ratio of women workers or production workers to all employees for the current month

$(XW/AE)p$ = the estimated ratio of women workers or production workers to all employees for the previous month

-
- <A> = Alpha, a value set between 0 and 1, inclusive, usually designated as 0.9
- = Beta, a value equal to $1 - <A>$, usually equal to 0.1
- xwp = the total of women workers or production workers for the previous month of the current matched sample of reports reporting both all employees and women workers or production workers
- xwc = the total of women workers or production workers for the current month of the current matched sample of reports reporting both all employees and women workers or production workers
- aep = the all employee total for the previous month of the current matched sample of reports reporting both all employees and women workers or production workers
- aec = the all employee total for the current month of the current matched sample of reports reporting both all employees and women workers or production workers
- xwp' = the women workers or production workers for the previous month of the report(s) with atypical women workers or production workers
- xwc' = the women workers or production workers for the current month of the report(s) with atypical women workers or production workers
- aep' = the total of all employees for the previous month of the report(s) with atypical women workers or production workers (this figure corresponds to the women worker or production worker total for the previous month of the atypical report(s), but this does not imply that the all employee figure is atypical)
- aec' = the total of all employees for the current month of the report(s) with atypical women workers or production workers (this figure corresponds to the women worker or production worker total for the current month of the atypical report(s), but this does not imply that the all employee figure is atypical)

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ExampleGiven Data

<u>Estimates:</u>	XWp = 2,050	
	AEp = 10,150	AEc = 10,460
<u>Matched Sample Totals:</u>	xwp = 605	xwc = 710
	aep = 3,010	aec = 3,160
<u>Atypical Totals:</u>	xwp' = 110	xwc' = 182
	aep' = 503	aec' = 605
<u>Constants:</u>	<A> = .9	 = .1

$$(XW/AE)_c = [<A> \cdot (XW/AE)_p] + [\cdot ([xwp - xwp']/[aep - aep'])]$$

$$+ [([xwc - xwc']/[aec - aec']) - ([xwp - xwp']/[aep - aep'])]$$

$$(XW/AE)_c = [(.9)(2,050/10,150)] + [(.1)([605 - 110]/[3,010 - 503])]$$

$$+ [([710 - 182]/[3,160 - 605]) - ([605 - 110]/[3,010 - 503])]$$

$$(XW/AE)_c = [(.9)(2,050/10,150)] + [(.1)(495/2,507)]$$

$$+ [(528/2,555) - (495/2,507)]$$

$$(XW/AE)_c = [(.9)(.2020)] + [(.1)(.1974)]$$

$$+ [.2067 - .1974]$$

$$(XW/AE)_c = .1818 + .0197 + .0093$$

$$(XW/AE)_c = \underline{.2108}$$

$$XWc = [(AEc - aec')(XW/AE)_c] + xwc'$$

$$XWc = [(10,460 - 605)(.2108)] + 182$$

$$XWc = [(9,855)(.2108)] + 182$$

$$XWc = 2,077 + 182$$

$$XWc = 2,259 = \underline{2.3}$$

8.5 ESTIMATING ALL EMPLOYEES FOR INDUSTRIES WITH LITTLE OR NO SAMPLE AND FOR INDUSTRIES WITH A TEMPORARILY INADEQUATE SAMPLE

8.5.1 Estimating All Employees (AE) for Industries with a Temporarily Inadequate Sample

A cell that is normally sample-based occasionally may not have any reports submitted for a closing, or it may have sample coverage that is too low to produce reliable estimates. This should only occur at a preliminary closing. In situations such as this, extrapolate the all employee (AE) estimate by multiplying the all employee estimate for the previous month by the average of the link relatives for that cell for the same month for the previous three (3) years. Avoid estimates based on one observation, such as a year-ago or a month-ago figure.

If a sample deficiency lasts for only one or two months, and the missing reports are received later, recompute the estimates for the month(s) involved using the augmented sample. However, if the deficiency in sample coverage appears to be permanent, continue to extrapolate the estimates or prepare them using one of the methods presented below in Sec. 8.5.2 until the next annual benchmark revision. Note such estimates on the estimating worksheets as: "not for publication separately." Evaluate permanent sample deficiencies at the next annual benchmark revision to determine if restratification of any estimating cells is necessary; this procedure may be avoided for a cell if sample solicitation is successful for the cell.

8.5.2 Estimating All Employees (AE) for Industries With Little or No Sample

The best basis for obtaining current estimates for any basic cell is an adequate sample; develop an adequate sample rapidly whenever possible. However, until an adequate sample can be obtained, the following methods are available to obtain current estimates:

1. Use an average of the link relatives derived from the UI employment data for each of the corresponding months of the previous three (3) years; substitute available CES microdata for the comparable all employee (AE) figures of the larger UI reports, if the CES microdata are available.

2. Use a composite link, i.e., a weighted average of the current all employee link relative and the comparable UI trend link.

Composite Link Formula:
$$L_c = [(<A>)(a_{ec}/a_{ep})] + [][\sum_{i=1}^n \left(\frac{E_c}{E_p}\right)/n]$$

Where:

- L_c = the composite link: a composite of the current all employee link relative (CES) and the comparable trend link (UI)
- $<A>$ = Alpha, a value set between 0 and 1, exclusive (applied to the current all employee link relative)
- $$ = Beta, a value equal to $1 - <A>$ (applied to the comparable UI trend link)
- a_{ec} = the all employee total for the current month of the current matched sample (CES)
- a_{ep} = the all employee total for the previous month of the current matched sample (CES)
- n = the number of years used to derive the comparable trend link (UI)
- E_c = the UI employment for the month of a given year comparable to the current month
- E_p = the UI employment for the month of a given year comparable to the previous month

NOTE: In this method, the number of years, n , used to derive the comparable UI trend link is determined by the analyst. If economic conditions have been relatively stable for some time, three years may be desirable; under other conditions, it may be better to use only one or two years.

This method may be used when the UI data are suspect and the cell has a weak sample or significant reports are delinquent. This method is not to be used indefinitely. The State should try to obtain an adequate and representative sample. Delinquency follow-up may need to be improved. Otherwise, the cell structure may need to be revised.

3. Use a link relative obtained from a closely related series, e.g., current employment trends of a Statewide sample could be used for the comparable series for an area if they generally have the same trends; or the trend of a closely-related employment series could be substituted.

NOTE: Note estimating worksheets to indicate that estimates prepared using the methods above are: "not for publication separately."

8.6 SPECIAL ESTIMATING INSTRUCTIONS FOR CERTAIN EMPLOYMENT SERIES

8.6.1 Introduction

Special estimating instructions are provided below for the following employment series:

- . Class I Line-haul Operating Railroads (Part of SIC 4011)
- . Class I Switching and Terminal Establishments (Part of SIC 4013)
- . Hotels and Other Lodging Places (SIC 70)
- . Amusement and Recreation Services (SIC 79)
- . Elementary and Secondary Schools (SIC 821)
- . Colleges and Universities (SIC 822)
- . Federal Government
- . State and Local Government

8.6.2 Class I Line-haul Operating Railroads (Part of SIC 4011) and Class I Switching and Terminal Establishments (Part of SIC 4013)

Sample data are not available for these segments of the railroad transportation industry. It is necessary for each State to base its current monthly estimates of employment for these industry segments on material furnished by BLS-Washington. This material includes the monthly national employment data provided to BLS-Washington by the Interstate Commerce Commission (ICC) for each Class I Line-haul Operating Railroad and each Class I Switching and Terminal Establishment.

Compute current State all employee (AE) estimates for these segments by multiplying the national figure provided by BLS for each railroad by the corresponding percentage of the total line employment in the State in the last benchmark month.

Carry all employee (AE) figures for railroads with fifty (50) or fewer employees in the State or area in the benchmark month as constants. These small establishments are usually units of railroads that do not operate in the State or area, but which do have freight or passenger agencies in the principal cities. In such cases the employment is usually so small that a change in the total line employment does not change the all employee estimate for this type of unit.

8.6.3 Hotels and Other Lodging Places (SIC 70)

Because of the difficulty in acquiring good sample coverage in the component small establishment industries, special procedures are frequently necessary in SIC 70 in order to accurately determine the current employment estimates.

The sample for hotels, motels, and tourist courts (SIC 701) is often inadequate for producing accurate employment estimates for States and areas because of low sample coverage for seasonal hotels. If so, use variable bias adjustment factors to determine the current employment estimates; this helps to compensate until the sample coverage can be improved. (See Sec. 8.3.6.)

8.6.4 Amusement and Recreation Services (SIC 79)

SIC 79 contains many highly seasonal establishments. Some may operate mainly in the colder months; others may operate mainly in the warmer months. The sample should include the proper mixture of establishments having the various seasonal patterns for a State or area. Some establishments in SIC 79, such as race tracks and amusement parks, have high employment only during very short seasons. If such establishments are included in the sample, their employment may need to be treated atypically; if they are not included in the sample, estimate their employment. Such estimates may be based on averages of the UI all employee figures for the previous three (3) years. Another alternative is to use variable bias adjustment factors. (See Sec. 8.3.6.)

It is recommended that a separate basic cell be established for each three-digit SIC in SIC 79. If this is not feasible, use some other logical breakdown for this industry.

8.6.5 Elementary and Secondary Schools (SIC 821) and Colleges and Universities (SIC 822)

In the CES survey, regular faculty members of educational institutions are considered to be employed throughout the year, regardless of the timing of their salary payments. The estimates of employment computed for the summer vacation months and other comparable vacation periods must reflect this employment.

Adequate samples of properly edited employment data will produce valid employment estimates for these industries. (See Sec. 6.5.4.A.) Should the sample coverage be inadequate, it may be possible to supplement the sample by using a correction factor based upon the trends of the public school samples which normally have better sample coverage. (NOTE: SIC 822 is significantly affected by fluctuations in the number of student workers.)

8.6.6 Federal Government

Each State is to produce and publish a Statewide employment series for total Federal Government. (See Sec. 12.7.1.) In addition, each State is to establish separate estimating cells for the Federal Government in the detail that seems to be reasonable and attainable for the State or area involved. The industry detail that may be published is discussed in Section 12: Publication Policy. (See Sec. 12.4.)

8.6.7 State and Local Government

Each State is to produce and publish a Statewide employment series for total State and local government. (See Sec. 12.7.1.) In addition, each State is to establish separate estimating cells for State and local government in the detail that seems to be reasonable and attainable for the State or area involved. A typical breakdown is shown below:

State and Local Government

State Government

State Education

State Government Hospitals

Other State Government

Local Government

Local Education

Local Government Hospitals

Other Local Government

The State agencies are to request that the State and local government installations in the sample for the CES survey report in sufficient detail to provide adequate sample data for the detailed estimation of employment each month.

NOTE: Special editing procedures for elected and temporary employees, for education employment in the summer vacation months and comparable vacation periods, and for editing the payroll data on the BLS 790 J-L and the BLS 790 S schedules are discussed in Section 6. (See Secs. 6.5.4 and 6.5.5.)

8.7 COMPUTING ANNUAL AVERAGES FOR ESTIMATES OF EMPLOYMENT (AE, WW, PW)

Compute annual averages each year for each employment series (AE, WW, PW). This is done by adding the twelve (12) monthly estimates for the calendar year for a series and dividing the result by twelve (12). Using this method, compute the annual averages for all cells (basic and summary). The level of precision for the annual averages is the same as that used when computing the monthly estimates. The annual averages obtained by this method may be of future use even though they are not published currently.

Since employment data transmitted to BLS-Washington by the States must be rounded to the nearest 100 employees and expressed in thousands (e.g., 1.9), the monthly data used in the annual average computations and the resulting annual averages must also be rounded and expressed in the same way.

Since the annual average for any employment series is computed using the series' monthly estimates, the annual average for a summary cell may differ slightly from the total of the annual averages of its component cells. This is acceptable. Do not change any annual averages in order to force them to add exactly.

Final Closing Review Sheet
(See Sec. 8.2.2.C)EXHIBIT 8-A

DATA TYPE: * _____

Year: _____

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Cell-ID:												
S. ratio												
E. ratio												
Diff.												
% Diff.												
Cell-ID:												
S. ratio												
E. ratio												
Diff.												
% Diff.												
Cell-ID:												
S. ratio												
E. ratio												
Diff.												
% Diff.												
Cell-ID:												
S. ratio												
E. ratio												
Diff.												
% Diff.												

*WW/AE or PW/AE

Wedge Computation Worksheet
(See Sec. 8.2.2.C)Exhibit 8-B

Month/Year _____

Wedge Type * _____

	Data Type	S. ratio	E. ratio	Total Diff.	Avg. Diff.	Wedge	Rev. Est.
Cell-ID:							
1st mo. _____							
2nd mo. _____							
3rd mo. _____							
Cell-ID:							
1st mo. _____							
2nd mo. _____							
3rd mo. _____							
Cell-ID:							
1st mo. _____							
2nd mo. _____							
3rd mo. _____							
Cell-ID:							
1st mo. _____							
2nd mo. _____							
3rd mo. _____							

* 1st-month, 2nd-month, or 3rd-month wedge

Exhibit 8-CFinal Closing Comparison Report for Ratios
of Production Workers to All Employees

(See Sec. 8.2.2.C)

Run Date: 05/12/85

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<u>Month</u>	<u>Year</u>	<u>Closing</u>	<u>Cell-ID</u>	<u>Sample PW/AE</u>	<u>Estimated PW/AE</u>	<u>Diff.</u>	<u>Percent Diff.</u>	<u>+ - 3%</u>	<u>+ - 1%</u>
07	85	F	337225	.7012	.6907	.0105	1.5		
08	85	F	337225	.7032	.6923	.0109	1.6		
09	85	F	337225	.7029	.6919	.0110	1.6		
07	85	F	337245	.6734	.7017	-.0283	-4.2	*	
08	85	F	337245	.6651	.6934	-.0283	-4.3	*	
09	85	F	337245	.6893	.7244	-.0351	-5.1	*	
07	85	F	337285	.7421	.7629	-.0208	-2.8		
08	85	F	337285	.7501	.7733	-.0232	-3.1	*	
09	85	F	337285	.7467	.7693	-.0226	-3.0	*	

Exhibit 8-DComputing Seasonal Correction Factors
(See Sec. 8.3.6)

	Year 1			Year 2				
	Benchmark Series	CES Sample Estimates	Ratio (1)/(2)	Benchmark Series	CES Sample Estimates	Ratio (4)/(5)	Average Ratio $\frac{[(3)+(6)]}{2}$	Linked Ratios
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
March	20,200	20,200	1.0000	26,100	26,100	1.0000	1.0000	----
Benchmark								
April	29,600	22,900	1.2926	35,700	29,400	1.2143	1.2535	1.2535
May	37,200	24,100	1.5436	41,800	30,400	1.3750	1.4593	1.1642
June	40,100	24,200	1.6570	44,700	29,900	1.4950	1.5760	1.0800
July	40,400	24,900	1.6225	45,900	29,100	1.5773	1.5999	1.0152
August	36,200	24,300	1.4897	42,300	28,400	1.4894	1.4896	.9311
September	26,300	21,200	1.2406	32,400	27,300	1.1868	1.2137	.8148
October	16,100	19,400	.8299	24,100	26,000	.9269	.8784	.7237
November	14,300	18,100	.7901	21,000	25,400	.8268	.8085	.9204
December	14,100	17,900	.7877	20,400	25,100	.8127	.8002	.9897
January	16,200	18,800	.8617	22,100	26,300	.8403	.8510	1.0635
February	19,300	19,900	.9698	25,400	27,400	.9270	.9484	1.1145
March	26,100	23,400	1.1154	33,200	30,200	1.0993	1.1074	1.1677

NOTE: This example uses only two (2) years of data; however, three (3) years are to be used normally.

Section 9: ESTIMATING HOURS AND EARNINGS

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Section 9: ESTIMATING HOURS AND EARNINGS9.1 INTRODUCTION AND OVERVIEW9.1.1 Introduction

The estimating procedures for hours and earnings presented in Section 9 are used to approximate the month-to-month trends of average weekly earnings (AWE), average hourly earnings (AHE), average weekly hours (AWH), average weekly overtime hours (AWOH), and a number of related series, by industry. Once these trends have been determined each month, the new levels of the hours and earnings estimates can be determined. The procedures in Section 9 are used at the national, State, and area levels.

Sections 9.1.2 and 9.2 show how to prepare hours and earnings estimates for cells which have adequate reporting samples. (See Sec. 3: Sampling.) They include information on how to determine the estimating cell structure and on the testing done to determine the need for, and the feasibility of, size stratification. Procedures are also presented for wedging hours and earnings estimates at final closings when necessary.

Section 9.3 shows how to identify atypical hours and earnings microdata and how to estimate hours and earnings when atypical data are present. Section 9.4 explains the various types of revisions which may be made to hours and earnings estimates. Finally, Section 9.6 provides procedures for deriving several series related to the basic hours and earnings data.

Throughout Section 9, the term "production workers" refers to all of the following unless otherwise noted:

- . production workers: mining and manufacturing
- . construction workers: construction
- . nonsupervisory employees: other nonmanufacturing

9.1.2 OverviewA. Estimating Procedures

There are no benchmarks for hours and earnings estimates. The validity of the estimates depends entirely upon representative samples, well-designed estimating methods, proper stratification, and a minimum of response errors. Since the estimates are not compared to benchmarks, it is essential to watch the trends in hours and earnings data very carefully.

Current hours and earnings estimates are based in part upon matched sample data for the current and previous months. The sample consists of all establishments reporting payroll (pr), worker-hours (wh), and production workers (pw). In addition, overtime worker-hours (otwh) are collected for manufacturing industries. The payroll and worker-hour microdata must be on a one-week basis in order to be used. Many BLS 790 reports are submitted this way; the others are converted to a one-week basis during the editing process. (See Sec. 6.)

The data are stratified by industry, and where appropriate, by size class into basic cells. A basic cell is a cell at the lowest level at which estimates are prepared. A summary cell is a combination of basic estimating cells and/or summary cells. Industry and size stratification are reviewed and updated periodically, usually once a year at benchmark time.

For each basic cell, sample totals for payroll, worker-hours, and production workers are obtained using schedules which have all three items reported for both months. For those manufacturing schedules which also contain overtime worker-hours, sample totals are also obtained for overtime worker-hours and for the production workers of schedules reporting overtime worker-hours.

- . $awh = wh / pw$
- . $ahe = pr / wh$
- . $awe = awh \times ahe$
- . $awoh = otwh / pw^*$

Where:

awh = average weekly hours for the matched sample data

ahe = average hourly earnings for the matched sample data

awe = average weekly earnings based on matched sample averages

awoh = average weekly overtime hours for the matched sample data

wh = weekly worker-hour total for the matched sample data

pr = weekly payroll total for the matched sample data

otwh = weekly overtime worker-hour total for the matched sample data

pw = production worker total of reports in the matched sample reporting both payroll and worker-hours

pw* = production worker total of reports in the matched sample reporting payroll, worker-hours, and overtime worker-hours

Example: Computing Hours and Earnings Sample Totals and Sample Averages for a Basic Cell

Report Number	Microdata			
	<u>pw</u>	<u>pr</u>	<u>wh</u>	<u>otwh</u>
1	498	180,150	20,013	501
2	205	79,425	8,959	981
3	256	85,237	9,522	107
4	1,011	411,123	42,541	2,191
5	<u>+ 145</u>	<u>+ 47,358</u>	<u>+ 6,377</u>	<u>+ 321</u>
Sample Totals:	2,115	803,293	87,412	4,101

Sample Averages:

$$awh = wh / pw = 87,412 / 2,115 = \underline{41.33}$$

$$ahe = pr / wh = 803,293 / 87,412 = \underline{9.190}$$

$$awe = awh \times ahe = 41.3 \times 9.19 = \underline{379.55}$$

$$awoh = otwh / pw = 4,101 / 2,115 = \underline{1.94}$$

Once the sample averages have been derived, they are inserted into a difference link and tapers formula. This formula promotes the continuity of the estimates, while also taking into account the over-the-month change. The result is hours and earnings estimates at the basic cell level. Adjustments for atypical hours and earnings sample data are also made at the basic cell level.

Usually hours and earnings estimates are aggregated up to summary level cells before they are published, although some basic cells may be publishable depending upon the nature of the data in the cells and the number of sample reports available. Summary cells are a combination of basic cells and/or other summary cells. Since the employment for a summary cell may not be distributed equally among the component cells, it is necessary to use production worker estimates to weight the hours and earnings estimates of the component cells before aggregating to a higher level. Hours and earnings estimates for summary cells are computed by weighting the estimates for the component cells by the production worker estimates, adding the resulting aggregates, and dividing them by the sum of the weights. This process ensures that the component cells exert an influence proportional to their employment size on the summary cell estimates.

B. Tabulations

At a minimum, each State produces a tabulation of the current matched sample showing for each basic cell the sample totals for the previous month and the current month for:

- . all employees (ae)
- . women workers (ww)
- . production workers (pw)
- . payroll (pr)
- . worker-hours (wh)
- . overtime worker-hours (otwh) for manufacturing cells

In addition, each State produces a listing of the individual sample reports (microdata) by report number within each basic cell, showing the data reported for both the previous month and the current month, as well as any comment codes assigned. The payroll and worker-hour microdata must be on a one-week basis.

Each State also produces a third listing of any late reporters in the current sample by report number within each basic cell. The data reported for the previous month are also shown on this tabulation, when they are available, for each late reporter so that important missing reports can be identified easily.

It is helpful to produce a tabulation showing analytical data for each basic and summary cell. This information is useful in analyzing current data trends. For each data type show: (1) estimates for the current month, the previous month, and a year ago, (2) the change over the month, and (3) the change over the year.

States using computer-based tabulations are encouraged to model these tabulations on those produced at BLS-Washington.

C. Key Reports

Each State maintains lists of important (key) reports for the State and for any area(s) for which it produces estimates. Each State reviews its microdata to determine if any key reports are missing. Special efforts are made to obtain the data for missing key reports. In order to maintain reliable hours and earnings estimates, it is necessary to maintain as complete a sample of reports as possible, giving special emphasis to ensuring consistent reporting by the key reporters.

A list of key reports required at the National level is sent to the States periodically. (See Appendix D.) The States must make every effort to obtain the data from these reporters in time for the National first closings. All national key reports must be received at BLS-Washington by the National third closing date specified for the data month involved, if at all possible.

9.2 ESTIMATING CURRENT HOURS AND EARNINGS

9.2.1 Determining the Estimating Cell Structure

A. Industry Stratification

Hours and earnings estimates are usually prepared in at least one degree finer industry detail than that intended for publication. These basic cells are then weighted up to summary cell levels using the production worker estimates as weights. For example, estimates published at the three-digit level would first be prepared at the four-digit level, and then weighted up. However, this is not a hard and fast rule--it is not always possible or necessary to prepare the estimates at the level below the published level. Depending upon the nature of the data in the cells involved and the number of sample reports available, it may be possible to publish estimates prepared at the basic cell level.

The aggregation procedure uses production worker estimates to weight the component cells to ensure that each basic cell exerts an influence proportionate to its importance in the summary cell. Since the employment in the summary cell is not distributed evenly among the component cells, this weighting procedure is necessary to derive accurate summary cell estimates.

B. Size Stratification

1. Introduction

Hours and earnings estimates usually are not published for the finest industry level (four-digit SIC) unless a finer level of stratification can be established, e.g., stratification by size of report (based on the number of all employees). However, a four-digit series may be published without size stratification, if such stratification has little effect on the estimates (the averages in the strata are close to each other), or if size stratification is impossible because of inadequate sample size in the size strata, while the sample size is adequate to produce good estimates at the four-digit level.

Before size stratification may be used, it is necessary to increase a cell's sample to an adequate and stable level of coverage. In addition, it is necessary to exhaust stratification by industry first. For example, try to separate a three-digit industry into its four-digit component cells before attempting size stratification. If this is not feasible, size stratification at the three-digit level may be acceptable. Stratification by size will usually produce maximum efficiency in establishing the levels of the hours and earnings averages as well as providing as good or better employment estimates. This is true principally for the trade and service industries where even three-digit industries have large heterogeneous universes populated by numerous small establishments. To a lesser extent, the earnings estimates for the construction industries may also be improved. However, construction is affected by so many phenomena that size stratification cannot cure all deficiencies. Size stratification may improve the earnings estimates in some manufacturing industries that have a high variation of hours and earnings between size classes, such as apparel and leather.

In order to prepare good hours and earnings estimates using size stratification, both the universe and the sample must contain sufficient members to support a stratified design. Otherwise the estimates may be less reliable than those prepared from unstratified samples as well as requiring considerably more work.

2. Determining the Need for, and the Feasibility of, Size Stratification

The testing procedure used to determine if size stratification is desirable, or even feasible, has various steps. Size stratification is undertaken only if a cell has adequate sample coverage. The procedure consists of the following:

1. Tabulate the ES-202 employment data for March of the benchmark period into eight (8) size classes: 0-9, 10-19, 20-49, 50-99, 100-249, 250-499, 500-999, and 1,000 and greater. Adjust for any classification differences between the CES and UI data.
2. Tabulate the CES sample for March of the benchmark period into the same eight (8) size classes. Using these sample data, compute the average hourly earnings (ahe), the average weekly hours (awh), and the ratios of production workers to all employees (pw/ae) for the industry as a whole and for each size stratum. The averages for the industry as a whole are unweighted, i.e., based on the sample totals for the entire cell.
3. Compute the production worker estimates (PW) for each stratum by multiplying the all employee benchmark figure (AE) by the sample ratio of production workers to all employees (pw/ae).
4. Compute the weighted average weekly hours estimate (AWH) for the industry as a whole (the average weighted by eight strata) by: (a) weighting the sample average weekly hours (awh) for each of the size strata by the production worker estimate (PW) for the stratum to obtain the estimated worker-hour aggregates (WH), (b) summing these aggregates, and (c) dividing the total obtained by the total of the production worker estimates.
5. Compute the weighted average hourly earnings estimate (AHE) for the industry as a whole (the average weighted by eight strata) by: (a) weighting the sample average hourly earnings (ahe) for each of the size strata by the estimated worker-hour aggregate (WH) for the stratum to obtain the estimated payroll aggregates (PR), (b) summing these aggregates, and (c) dividing the total obtained by the total of the estimated worker-hour aggregates.
6. Compare the unweighted sample averages for the industry as a whole with the averages weighted by eight strata. If the unweighted averages (awh, ahe) differ from the averages weighted by eight strata by one percent (1%) or less, size stratification is not necessary.

To simplify the application of these criteria, refer to the following table:

<u>AHE</u>	<u>Permissible Difference</u>	<u>AHE</u>	<u>Permissible Difference</u>
0.50 - 1.49	1 cent	10.50 - 11.49	11 cents
1.50 - 2.49	2	11.50 - 12.49	12
2.50 - 3.49	3	12.50 - 13.49	13
3.50 - 4.49	4	13.50 - 14.49	14
4.50 - 5.49	5	14.50 - 15.49	15
5.50 - 6.49	6	15.50 - 16.49	16
6.50 - 7.49	7	16.50 - 17.49	17
7.50 - 8.49	8	17.50 - 18.49	18
8.50 - 9.49	9	18.50 - 19.49	19
9.50 - 10.49	10	19.50 - 20.49	20

The permissible difference for average weekly hours (AWH) is 0.4 hour.

NOTE: The difference (in cents or hours) refers to the maximum allowable difference for which size stratification is not necessary; if the difference of either cents or hours exceeds this amount, stratification is necessary and is undertaken if the other criteria shown below are met.

7. If the tests in Step 6 indicate that size stratification is required, the eight size strata are then collapsed into two or three size strata. The objective is to find a pattern which produces hours and earnings averages which differ from the weighted industry averages stratified by the eight strata by not more than the amounts shown in Step 6.

The number of size strata is limited to two or three in order to ensure that each cell has an adequate sample and to keep the number of cells at a manageable level.

The collapsed strata must meet the following criteria in order to be used:

- . Each stratum must contain at least fifteen (15) sample reports or have sample reports which cover 75% of the universe.
- . The stratum boundaries should conform whenever possible to any naturally homogeneous groupings which exist in the hours and earnings data.
- . If a two-strata pattern produces averages which are slightly further away from the eight-strata averages than averages produced by a three-strata pattern, but still within the established limits, then the two-strata pattern is preferred.

Strata must be composed of adjacent size classes.

Exhibit 9-A illustrates the computations involved in the determination of size stratification. In this example, the average hourly earnings figure (ahe) of the unstratified sample (\$8.963) is 21 cents above the average hourly earnings figure (AHE) computed from the stratified sample (\$8.749) using eight strata. Since the two-strata pattern produces an AHE figure only 3 cents different from the eight strata, it meets the criteria and is used. Large variations in hours and/or earnings between size classes will point out logical size class groupings for size stratification. In this example the average hourly earnings data show a very large increase between the 50-99 size class and the 100-249 size class.

A review of industry and size stratification is normally done annually. Similar SICs (industries) may be combined to form a basic cell if their sample coverage is insufficient individually. If an industry is stratified by size, each size stratum is considered to be a basic cell. The above example has two basic cells -- size strata 0-99, and size strata 100+.

9.2.2 Determining If Valid Overtime Worker-hours Can Be Produced for a Cell

Reporters in manufacturing industries are asked to report overtime worker-hours (otwh). To test a cell in order to determine if its overtime worker-hour sample data are adequate, compare the average weekly hours (awh) computed from the sample totals for all of the reports reporting worker-hours (wh) to the average weekly hours (awh) computed from the sample totals of those reports reporting both worker-hours (wh) and overtime worker-hours (otwh). Average weekly overtime hours (awoh) for a cell may not be published unless the two average weekly hours (awh) figures are comparable for a period of months, i.e., unless they consistently differ by about 0.2 hour or less; otherwise the averages would be inconsistent. Overtime worker-hours must be computed for at least the following:

- . Total Manufacturing
- . Durable Goods
- . Nondurable Goods

If this test is met, the average weekly overtime hours (awoh) figure for the current month of the current matched sample is computed by dividing the weekly overtime worker-hour total (otwh) for the current month of the current matched sample by the production worker total (pw) of the same reports for the current month of the current matched sample. Each of the reports in the current matched sample for weekly overtime worker-hours must have reported all of the following for both months: production workers, total worker-hours, and overtime worker-hours (pw, wh, otwh).

9.2.3 Estimating Current Hours and Earnings

A. Estimating Average Weekly Hours, Average Hourly Earnings, and Average Weekly Overtime Hours

1. Introduction

The basic formula used to compute estimates of average weekly hours (AWH), average hourly earnings (AHE), and average weekly overtime hours (AWOH) for basic cells is:

$$\bar{X}_c = (<A> \cdot \bar{X}_p) + (\cdot \bar{x}_p) + (\bar{x}_c - \bar{x}_p)$$

Where:

$\bar{X}_c$ = the hours or earnings estimate (AWH, AHE, AWOH) for the current month

$\bar{X}_p$ = the hours or earnings estimate (AWH, AHE, AWOH) for the previous month

$\bar{x}_c$ = the hours or earnings sample average (awh, ahe, awoh) for the current month of the current matched sample

$\bar{x}_p$ = the hours or earnings sample average (awh, ahe, awoh) for the previous month of the current matched sample

<A> = Alpha, a value set between 0 and 1, inclusive, usually designated as 0.9

 = Beta, a value equal to 1 - <A>, usually equal to 0.1

The formula uses data for both the current month and the previous month in order to enhance the continuity of the estimates. Because the panel of establishments reporting in the sample is not absolutely fixed from month to month, there may be a difference between the current sample average for the previous month and the estimate for the previous month. The procedure embodied in the formula is called the difference link and tapers technique, i.e.:

. Difference Link: $(\bar{x}_c - \bar{x}_p)$

. Tapers: $(\langle A \rangle \cdot \bar{x}_p) + (\langle B \rangle \cdot \bar{x}_p)$

This technique has certain advantages, such as:

1. It uses matched sample data.
2. It tapers the estimate for the previous month ($\bar{x}_p$) towards the sample average for the previous month of the current matched sample ($\bar{x}_p$).
3. The weights, alpha ($\langle A \rangle$) and beta ($\langle B \rangle$), promote continuity by heavily favoring the estimate for the previous month ($\bar{x}_p$). This helps to minimize the need to use the wedging procedure described in Sec. 9.2.3.D.

The tapers portion of the formula creates a weighted composite estimate of the previous month's level. This composite estimate is made up of the previous month's estimate and the sample average for the previous month from the current sample. The sum of the weights alpha and beta is 1, i.e., $\langle A \rangle + \langle B \rangle = 1$. A value of 0.9 is usually chosen for alpha, therefore beta is usually equal to 0.1. This results in a composite estimate for the previous month which heavily favors the previous month's estimate (90%), but does take into account new data for the previous month available from the current sample (10%). This procedure helps to minimize large fluctuations in the estimates from month to month due to changes in sample composition.

The choice of values for alpha and beta is based upon empirical evidence and may be changed at the discretion of the analyst. For example, if the analyst has reason to suspect the accuracy of the estimate for the previous month, less weight can be given to that estimate by changing the weights to 0.8 and 0.2, or 0.7 and 0.3. Another time when changing the weights would be helpful is where the estimate for the previous month and the sample average for the previous month differ by more than

three percent in the same direction for three consecutive months. By changing the weights to 0.8 for alpha and 0.2 for beta, the estimates will reflect the current sample levels more quickly. The weights may be varied in the construction industry depending upon the time of year.

The difference link portion of the formula is simply the over-the-month change indicated by the current month's sample. The difference between the sample averages for the current and previous months is added to the result of the tapers portion of the formula. The result is the estimate for the current month, at the basic cell level.

2. Estimating Methods for Basic Cells

The basic formula for estimating hours and earnings averages may be expressed in the following ways:

$$\bar{x}_c = (<A> \cdot \bar{x}_p) + (\cdot \bar{x}_p) + (\bar{x}_c - \bar{x}_p)$$

$$AWH_c = (<A> \cdot AWH_p) + (\cdot awh_p) + (awh_c - awh_p)$$

$$AHE_c = (<A> \cdot AHE_p) + (\cdot ahe_p) + (ahe_c - ahe_p)$$

$$AWOH_c = (<A> \cdot AWOH_p) + (\cdot awoh_p) + (awoh_c - awoh_p)$$

Example for AWH:

Given Data:

Constants: <A> = .9 = .1

Estimates: AWHp = 36.86

Matched Sample Data: awhp = 38.14 awhc = 36.61

$$\begin{aligned} AWH? &= (<A> \cdot AWHp) + (\cdot awhp) + (awhc - awhc) \\ &= (.9 \times 36.86) + (.1 \times 38.14) + (36.61 - 38.14) \\ &= 33.174 + 3.814 - 1.53 = 35.458 \\ &= 35.46 = \underline{35.5} \end{aligned}$$

Example for AHE:Given Data:Constants: $\langle A \rangle = .9$ $\langle B \rangle = .1$ Estimates: $AHE_p = 6.223$ Matched Sample Data: $ah_e_p = 6.245$ $ah_e_c = 6.122$

$$\begin{aligned}
 AHE_c &= (\langle A \rangle \cdot AHE_p) + (\langle B \rangle \cdot ah_e_p) + (ah_e_c - ah_e_p) \\
 &= (.9 \times 6.223) + (.1 \times 6.245) + (6.122 - 6.245) \\
 &= 5.6007 + .6245 - .123 \\
 &= 6.1022 = \underline{6.10}
 \end{aligned}$$

Example for AWOH:Given Data:Constants: $\langle A \rangle = .9$ $\langle B \rangle = .1$ Estimates: $AWOH_p = 2.35$ Matched Sample Data: $awoh_p = 2.40$ $awoh_c = 1.54$

$$\begin{aligned}
 AWOH_c &= (\langle A \rangle \cdot AWOH_p) + (\langle B \rangle \cdot awoh_p) + (awoh_c - awoh_p) \\
 &= (.9 \times 2.35) + (.1 \times 2.40) + (1.54 - 2.40) \\
 &= 2.115 + .24 - .86 \\
 &= 1.495 = 1.50 = \underline{1.5}
 \end{aligned}$$

The formulas for computing estimated aggregates in basic cells are:

1. $WH_c = PW_c \times AWH_c$
2. $PR_c = WH_c \times AHE_c$
3. $OTWH_c = PW_c \times AWOH_c$

Where:

PW_c = the estimate of production workers for the current month

WH_c = the estimated weekly worker-hour aggregate for the current month

PR_c = the estimated weekly payroll aggregate for the current month

$OTWH_c$ = the estimated weekly overtime worker-hour aggregate for the current month

AWH_c = the estimate of average weekly hours for the current month

AHE_c = the estimate of average hourly earnings for the current month

$AWOH_c$ = the estimate of average weekly overtime hours for the current month

NOTE: The methodologies used to compute the estimates of AWH, AHE, and AWOH are comparable to those used to compute the ratios of women workers to all employees (WW/AE) and production workers to all employees (PW/AE).

3. Estimating Methods for Summary Cells

Estimates of hours and earnings averages (AWH, AHE, AWOH) for summary cells are computed by: (1) weighting the estimates of hours and earnings averages for basic cells, (2) summarizing the resulting weighted data (estimated aggregates), and (3) dividing the estimated aggregates by the sum of the weights for the component cells. This ensures that each component cell exerts an influence proportionate to its importance in the summary cell.

The formulas for computing estimated aggregates in basic cells are shown at the end of the previous subsection. The estimate of production workers for the current month is used as the weight when computing the estimated worker-hour aggregate for the current month ($WH_c = PW_c \times AWH_c$). It is also used as the weight when computing the estimated overtime worker-hour aggregate for the current month ($OTWH_c = PW_c \times AWOH_c$). The estimated worker-hour aggregate for the current month is used as the weight when computing the estimated payroll aggregate for the current month ($PR_c = WH_c \times AHE_c$).

The estimated aggregates for the current month (WH_c , PR_c , $OTWH_c$) for a summary cell are computed by adding the comparable estimated aggregates for the current month for the component cells.

The weighted estimates of hours and earnings averages for the current month (AWH_c, AHE_c, AWOH_c) for a summary cell are computed by dividing the estimated aggregates for the summary cell by the sum of the comparable weights in the component cells.

The basic formula for obtaining an estimated aggregate for a summary cell is:

$$A_s = A_1 + A_2 + A_3 + \dots + A_n$$

Where:

A_s = the estimated hours or earnings aggregate (WH, PR, OTWH) for a summary cell = the sum of the comparable estimated aggregates for the component cells up to and including the nth cell.

This formula may also be expressed in the following ways:

1. $WH_s = WH_1 + WH_2 + WH_3 + \dots + WH_n$
2. $PR_s = PR_1 + PR_2 + PR_3 + \dots + PR_n$
3. $OTWH_s = OTWH_1 + OTWH_2 + OTWH_3 + \dots + OTWH_n$

The following formulas are used to determine the estimates of the hours and earnings averages (AWH, AHE, AWOH) for summary cells, using the estimated aggregates computed above and the corresponding production worker estimates (PW). (The definitions of the terms in these formulas may be found at the end of the previous subsection.)

1. $AWH_c = WH_c / PW_c$
2. $AHE_c = PR_c / WH_c$
3. $AWOH_c = OTWH_c / PW_c$

Example: Computing Hours and Earnings Estimates for a Summary CellGiven:

<u>Basic Cell</u>	<u>PW</u>	<u>AWH</u>	<u>AHE</u>	<u>AWE</u>	<u>AWOH</u>
A: 3721	3,112	40.86	9.231	377.51	1.86
B: 3724	1,865	47.12	10.011	471.47	8.03
C: 3728	8,081	38.24	8.500	324.70	0.98

Aggregates: Cell A + Cell B + Cell C = Cell X (372)

PW	3,112	1,865	8,081	13,058
WH = (PW)(AWH)	127,156	87,879	309,017	524,052
PR = (WH)(AHE)	1,173,777	879,757	2,626,645	4,680,179
OTWH = (PW)(AWOH)	5,788	14,976	7,919	28,683

Cell X: 372 (Weighted Averages):

$$AWH = WH/PW = 524,052 / 13,058 = 40.13 = \underline{40.1}$$

$$AHE = PR/WH = 4,680,179 / 524,052 = 8.931 = \underline{8.93}$$

$$AWE = (AWH)(AHE) = (40.1)(8.93) = \underline{358.09}$$

$$AWOH = OTWH/PW = 28,683 / 13,058 = 2.20 = \underline{2.2}$$

4. Rounding of Hours and Earnings Data for Basic and Summary CellsMatched Sample DataEstimates

<u>Item</u>	<u>Number of Decimal Places</u>	<u>Item</u>	<u>Number of Decimal Places</u>
awh:	2	AWH:	1
ahc:	3	AHE:	2
awoh:	2	AWOH:	1
awe:	2	AWE:	2

B. Estimating Average Weekly Earnings

Average weekly earnings figures are computed in the same manner whether the data involved are sample data or estimated data and whether the cells involved are basic cells or summary cells.

For sample data in basic or summary cells, the formula used to compute average weekly earnings is:

$$awe_c = awh_c \times ahe_c$$

For estimated data in basic or summary cells, the formula used to compute average weekly earnings is:

$$AWE_c = AWH_c \times AHE_c$$

When computing average weekly earnings, first round the average weekly hours to one (1) decimal place, and the average hourly earnings to two (2) decimal places. Then multiply these two rounded figures to obtain the average weekly earnings figure; round it to two (2) decimal places.

C. Estimating Weekly Payroll Aggregates for State/Local Government Cells

A special method is necessary in order to estimate the weekly payroll aggregates for State/local government cells, because no data on hours are collected for those industries on the BLS 790 J-L schedules.

1. Basic Cells

Compute the estimated weekly payroll aggregates for the current month for State/local government basic cells as follows:

$$GPR_c = (GPR_p)(gpr_c / gpr_p)$$

Where:

GPR_c = the estimated weekly payroll aggregate for the current month for a basic State/local government cell

GPR_p = the estimated weekly payroll aggregate for the previous month for a basic State/local government cell

gpr_c = the sample total of weekly payrolls for the current month of the current matched sample for a basic State/local government cell

gpr_p = the sample total of weekly payrolls for the previous month of the current matched sample for a basic State/local government cell

Example:Given: $GPR_p = 811,223$

$$gpr_p = 564,331 \quad gpr_c = 571,876$$

$$\begin{aligned} GPR_c &= (GPR_p)(gpr_c / gpr_p) \\ &= (811,223)(571,876 / 564,331) \\ &= (811,223)(1.013370) \\ &= \underline{822,069} \end{aligned}$$

2. Summary Cells

Compute the estimated weekly payroll aggregates for the current month in State/local government summary cells as follows:

$$GPR_s = GPR_1 + GPR_2 + GPR_3 + \dots + GPR_n$$

Where:

GPR_s = the estimated weekly payroll aggregate for the current month in a State/local government summary cell = the sum of the comparable estimated weekly payroll aggregates for the component cells up to and including the nth cell.

NOTE: Estimates of State/local government payroll aggregates (GPR) are not aggregated any higher than the Total State and Local Government cell.

D. Wedding Hours and Earnings Estimates at "Final" Closings

"Final" closing estimates are reviewed each month to see if any basic cells have hours and earnings estimates (X) meeting the following criteria:

1. The difference between the sample average and the estimate for the current month exceeds 3%, i.e., $[(\bar{x}_c - \bar{x}_c) / \bar{x}_c] [100] > 3\%$.

2. Such differences have occurred in the same direction for three (3) consecutive months, i.e., the current month and the two prior months.

If these criteria are met, it is necessary to decrease the difference over a period of months (usually three) using a wedging procedure (see below) until the difference between the sample average and the estimate is less than one percent (1%). When this situation occurs, there has been a significant sample break; i.e., there is a large difference between the estimate for the previous month and the current sample average for the previous month. An example of what might cause such a break would be sample solicitation. As the number of reporting establishments increase, the sample averages can be expected to change, with the current sample (containing more establishments) giving the better average. However, since the difference link and tapers formula heavily weights the previous month's estimate in calculating the estimate for the current month, a growing gap can appear between the sample average and the estimate for the current month. In these cases, a wedging procedure is used to push the current month's estimate closer to the current month's sample average. A wedge is calculated and applied to the current month's estimate over a series of months until the difference between the estimate and the sample average is less than one percent (1%). Exception: If an authentic economic event occurs (e.g., the death of a large establishment paying a much higher or lower wage for a cell), the change should be reflected in the estimates as soon as possible after the time of occurrence. Wedging is not performed in this case.

Wedging Procedure

1. Review the sample averages ($\bar{x}$) and the estimates ($\bar{X}$) for the current month for each basic cell and note any differences exceeding three percent (3%).

2. Record the following for cells with differences exceeding three percent (3%)

- . Cell-ID
- . Data Type (AWH, AHE, AWOH)
- . Sample Average ($\bar{x}$)
- . Estimate ($\bar{X}$)
- . Difference ($\bar{x} - \bar{X}$) -- be careful to include the plus (+) or minus (-) sign
- . Percent Difference, $\left(\frac{\bar{x} - \bar{X}}{\bar{x}} \right) (100)$ -- be careful to include the plus (+) or minus (-) sign

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3. Determine if this is the third consecutive month with a difference exceeding three percent (3%) in the same direction. If so, record the following for each basic cell and data type (AWH, AHE, AWOH) involved, for the current month and for the two (2) months preceding it:

- . the sample average ($\bar{x}$)
- . the estimate ($\bar{X}$)
- . the difference ($\bar{x} - \bar{X}$)
- . the total of the three differences
- . the average of the three differences
- . the wedge, usually the average difference divided by three (the first-month wedge)
- . the revised estimate (the wedge is added to or subtracted from the original estimate for the current month in order to bring it closer to the sample average.

If the difference in the fourth month is less than one percent (1%), the wedging procedure is not continued. However, if the difference between the sample average and the estimate is one percent (1%) or greater in the fourth month (now the current month), the wedging procedure is continued as follows. Compute the average difference for the three (3) most recent months using the revised estimate for the previous month computed using the first-month wedge and divide it by two (2) to obtain the second-month wedge; apply it to the fourth month's estimate in order to bring it closer to the sample average and form the revised estimate for the fourth month.

If the difference is still one percent or greater after the first-month wedge is applied, continue the wedging procedure each month until a difference of less than one percent (1%) is achieved.

If the difference in the fifth month is less than one percent (1%), the wedging procedure is not continued. However, if the difference between the sample average and the estimate is one percent (1%) or greater in the fifth month (now the current month), the wedging procedure is continued as follows. Compute the average difference for the three (3) most recent months using the revised estimate for the previous month computed using the second-month wedge; use the entire amount of the average difference as the third-month wedge; apply it to the fifth month's estimate in order to bring it closer to the sample average and form the revised estimate for the fifth month.

If a calculated wedge should exceed the sample average by going above it in an upward wedge, or by going below it in a downward wedge, use the sample average as the revised estimate for the current month. Although three-month wedges are normally used, it may be desirable at times to wedge a very large difference (10% or greater) over a longer period. If this is the case, the procedures above are adjusted accordingly.

For example, if a five-month wedge were desired, the wedges would be determined as follows:

<u>Wedge Type</u>	<u>Consecutive Month</u>	<u>Wedge (Avg. Diff. Divided by:)</u>
1st-month wedge	3rd	5
2nd-month wedge	4th	4
3rd-month wedge	5th	3
4th-month wedge	6th	2
5th-month wedge	7th	1

Enter on the worksheet for the current month whether a wedge is a first-month wedge, a second-month wedge, etc., also enter the period for which the estimate is being wedged.

Example of Wedge Computation (AHE)

Month:	1	2	3	4	5	6
Samp. Avg. = $\bar{x}$	8.12	8.19	8.08	8.11	8.16	8.13
Estimate = $\bar{X}$	8.64	8.73	8.59	8.42	8.26	
Revised Est. = $\bar{X}^*$			8.42	8.22	8.16	
Diff. = $\bar{x} - \bar{X}$	-0.52	-0.54	-0.51	-0.31	-0.10	0
Rev. Diff. $\bar{x} - \bar{X}^*$			-0.34	-0.11	0	
% Diff. = $\frac{\bar{x} - \bar{X}}{\bar{x}} \times 100$	-6.4%	-6.6%	-6.3%	-3.8%	-1.2%	0%
Rev. % Diff. = $\frac{\bar{x} - \bar{X}^*}{\bar{x}} \times 100$			-4.2%	-1.4%	0%	

First-month Wedge:

$$(-.52) + (-.54) + (-.51) = -1.57 \text{ (Total of Diffs.)}$$

$$-1.57 / 3 = -.52 \text{ (Avg. Diff.)}$$

$$-.52 / 3 = -.17 \text{ (First-month wedge)}$$

$$8.59 - .17 = \underline{8.42} \text{ (Revised Estimate)}$$

Second-month Wedge:

$$(-.54) + (-.34) + (-.31) = -1.19$$

$$-1.19 / 3 = -.40$$

$$-.40 / 2 = -.20$$

$$8.42 - .20 = \underline{8.22}$$

Third-month Wedge:

$$(-0.34) + (-0.11) + (-0.10) = -0.55$$

$$-0.55 / 3 = -.18$$

$$8.26 - .18 = (8.08)$$

Note: The result (8.08) is not used as the revised estimate for the fifth month since it overshoots the sample average; the revised estimate for the fifth month is made equal to the sample average (8.16).

A fourth-month wedge is unnecessary in this example, since the difference between the sample average and the estimate in the fifth month is less than one percent (1%). (The averages and the differences are rounded to two decimal places here for illustrative purposes only.)

This procedure may be done manually using worksheets and a calculator, or the worksheets may be eliminated by using a computer-produced tabulation supplemented with manual entries.

The first worksheet (See Exhibit 9-B) is used to post or compute the following for each basic cell for each month for a year:

. Cell-ID

For AWH:

. Sample Average	. Estimate
. Difference	. Percent Difference

For AHE:

. Sample Average	. Estimate
. Difference	. Percent Difference

For AWOH:

. Sample Average	. Estimate
. Difference	. Percent Difference

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The second worksheet (see Exhibit 9-C) is used to compute the following for each basic cell being wedged:

- . the total of the differences
- . the average of the differences
- . the wedge
- . the revised estimate

If a computer-produced tabulation is used, it must show the following for each basic cell for the current month and for the two prior months. (See Exhibit 9-D.).

- . Month
- . Year
- . Closing (Final)
- . Cell-ID
- . Data Type (AWH, AHE, AWOH)
- . Sample Average ($\bar{x}$)
- . Estimate ($\bar{X}$)
- . Difference (+ or -)
- . % Difference
- . Over 3% Indicator (*), for first-month wedges
- . 1% or Greater Indicator (**), for succeeding-month wedges

This tabulation allows easy identification of basic cells with differences exceeding three percent (3%) in the same direction for first-month wedges and with differences of one percent (1%) or greater for succeeding-month wedges. The status of other cells can easily be reviewed also. This tabulation may be used as follows to avoid the use of separate worksheets:

1. Check notations on the tabulations for the two (2) preceding months and record in the appropriate place on the current tabulation any wedges performed then. Indicate the type of wedge in each case (first-month, second-month, etc.).

2. Locate those cases where an asterisk (*) or a manual notation for a previous wedge appears for all three (3) months shown. (The manual notation is equivalent to an asterisk in that it indicates a past or present differences exceeding three percent (3%) for a first-month wedge or one percent (1%) or greater for succeeding-month wedges. In the case of the manual notation, such a difference existed prior to wedging even if it does not at present.)

3. Eliminate any cases where the differences are not in the same direction.

4. Make any nonwedging modifications to the tabulation which may be necessary because of the deletion, addition, correction, or atypical treatment of microdata.

5. Compute the wedges of various types on the tabulation; enter the results on the tabulation.

6. Record the revised estimates on the tabulation.

7. Update the current ratios, as needed, to produce continuous series.

E. Permanent Breaks in CES Series

Permanent breaks in CES series are caused by the following: (1) a major change in an industry's definition (SIC Revision); (2) the permanent loss of a major reporter from the sample; and (3) a major error in the coding of an industry or area. Series which have experienced a permanent break exceeding three percent (3%) during the year are reviewed at benchmark time. If the remaining sample in those series is not reflective of the universe characteristics, the series must be broken.

9.3 ESTIMATING HOURS AND EARNINGS WHEN SOME HOURS AND EARNINGS MICRODATA ARE TREATED ATYPICALLY

9.3.1 Identifying Reports Which Have Atypical Hours and Earnings Data

In general, adjustments are less frequent for atypical hours and earnings microdata than for atypical employment microdata. (See Sec. 8.4.) Such atypical adjustments are not normally made for hours and earnings data unless the adjusted estimate differs from the unadjusted estimate by more than one percent (1%) at the lowest published level affected.

A report should show atypical hours and earnings data only rarely. For example, such an occurrence could be caused by a fire during the survey week resulting in fewer hours being worked that week. When the sample averages for a cell are unduly influenced by such a report, the report is given only its own weight when adjusted figures are computed, i.e., the computations are performed with the atypical data excluded from certain terms, thus limiting its influence on the final results.

Only reports with a large proportion of the sample employment and with a substantial change in hours and/or earnings caused by a unique occurrence are handled atypically. In other words, only extreme unique situations are handled atypically.

A report with such high employment that it dominates the sample (for example, particularly in manufacturing, an employer may be the only large employer in an SMSA) is usually handled best by placing it in a separate cell to avoid the necessity of making frequent judgments on its typical/atypical status. (This is an exception to the rule in Sec. 9.2.1.B.2 that each basic cell must contain at least fifteen (15) sample reports.)

The examination of estimates to identify possible atypical microdata is done at the basic cell level. Adjustments made because of atypical microdata are also made at this level.

9.3.2 Estimating Hours and Earnings When Some Hours and Earnings Microdata Are Treated Atypically

The formulas presented in Sec. 9.3.2 are used to compute estimates of hours and earnings (AWH, AHE, AWOH) when it is necessary to treat some hours and earnings microdata atypically.

A. Estimating Average Weekly Hours When Some Hours and Earnings Microdata Are Treated Atypically

The basic formula for estimating average weekly hours (AWH) given in Sec. 9.2.3.A.2 is shown again here. When atypical treatment of some hours and earnings microdata is necessary, certain terms in the formula are redefined.

$$AWH_c = (<A> \cdot AWH_p) + (\cdot awhp) + (awhc - awhp)$$

When atypical treatment of hours and earnings data is necessary, substitute the following for the appropriate terms in the formula above:

$$\frac{awh_p = \left(\frac{wh_p - wh_p'}{pw_p - pw_p'} \right) (PW_p - pw_p') + wh_p'}{PW_p}$$

$$\frac{awh_c = \left(\frac{wh_c - wh_c'}{pw_c - pw_c'} \right) (PW_c - pw_c') + wh_c'}{PW_c}$$

The basic formula used to compute the estimate of average weekly hours for the current month (AWH_c) is modified by substituting different terms for ' awh_p ' and ' awh_c ' which cause the microdata selected to be treated atypically. The results of the computations done in these terms are entered into the basic formula.

The following computations are done in the substituted terms, for the previous month and for the current month:

1. The worker-hour total of the atypical report(s) is subtracted from the sample total for worker-hours to obtain the adjusted sample total for worker-hours excluding the atypical microdata ($wh - wh' = wh^*$).
2. The production worker total of the atypical report(s) is subtracted from the sample total for production workers to obtain the adjusted sample total for production workers excluding the atypical microdata ($pw - pw' = pw^*$).
3. The adjusted sample total for worker-hours is divided by the adjusted sample total for production workers to obtain the adjusted sample average (weekly hours) excluding the atypical microdata ($wh^* / pw^* = awh^*$).

4. The production worker total of the atypical report(s) is subtracted from the production worker estimate to obtain the adjusted production worker estimate excluding the atypical microdata ($PW - pw_p = PW^*$).

5. The adjusted production worker estimate is then multiplied by the adjusted sample average (weekly hours) to obtain the adjusted worker-hour estimate ($PW^* \times awh^* = WH^*$).

6. Next, the worker-hour total of the atypical report(s) is added to the adjusted worker-hour estimate excluding the atypical microdata to obtain the adjusted worker-hour estimate including the worker-hours of the atypical report(s) given only their own weight ($WH^* + wh' = WH^{**}$).

7. Finally, the adjusted worker-hour estimate obtained in Step 6 is divided by the production worker estimate to obtain the estimate of average weekly hours adjusted for the atypical microdata ($WH^{**} / PW = AWH^{**}$).

This leads to the following formula:

$$AWH_c = [(A) (AWH_p)] +$$

$$\left[\left(\frac{wh_p - wh_p'}{pw_p - pw_p'} [PW_p - pw_p'] + wh_p' \right) \right] +$$

$$\left[\left(\frac{wh_c - wh_c'}{pw_c - pw_c'} [PW_c - pw_c'] + wh_c' \right) - \left(\frac{wh_p - wh_p'}{pw_p - pw_p'} [PW_p - pw_p'] + wh_p' \right) \right]$$

Definitions of Terms in the Formula:

AWH_p = the estimate of average weekly hours for the previous month

AWH_c = the estimate of average weekly hours for the current month

PW_p = the estimate of production workers for the previous month

PW_c = the estimate of production workers for the current month

$\langle A \rangle$ = Alpha, a value set between 0 and 1, inclusive, usually designated as 0.9

$\langle B \rangle$ = Beta, a value equal to $1 - \langle A \rangle$, usually equal to 0.1

pw_p = the production worker total for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, and wh

pw_c = the production worker total for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, and wh

wh_p = the weekly worker-hour total for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

wh_c = the weekly worker-hour total for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh,

awh_p = the average weekly hours for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

awh_c = the average weekly hours for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

pw_p' = the production worker total of the atypical report(s) for the previous month

pw_c' = the production worker total of the atypical report(s) for the current month

wh_p' = the total weekly worker-hours of the atypical report(s) for the previous month

wh_c' = the total weekly worker-hours of the atypical report(s) for the current month

Given Data:Example for AWH:Constants: $\langle A \rangle = .9$ $\langle B \rangle = .1$ Estimates: $AWH_p = 36.86$ $PW_p = 11,009$ $PW_c = 10,926$ Sample Data: $pw_p = 2,425$ $pw_c = 2,366$ $wh_p = 92,496$ $wh_c = 86,629$ $awh_p = 38.14$ $awh_c = 36.61$ Atypical Data: $pw_p' = 205$ $pw_c' = 198$ $wh_p' = 9,091$ $wh_c' = 5,438$

$$AWH_c = [(\langle A \rangle)(AWH_p)] +$$

$$\left[(\langle B \rangle) \left(\frac{\left[\frac{wh_p - wh_p'}{pw_p - pw_p'} \right] [PW_p - pw_p'] + wh_p'}{PW_p} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{wh_c - wh_c'}{pw_c - pw_c'} \right] [PW_c - pw_c'] + wh_c'}{PW_c} \right) \right] -$$

$$\left(\frac{\left[\frac{wh_p - wh_p'}{pw_p - pw_p'} \right] [PW_p - pw_p'] + wh_p'}{PW_p} \right)$$

$$AWH_c = [(.9) (36.86)] +$$

$$\left[(.1) \left(\frac{\left[\frac{92,496 - 9,091}{2,425 - 205} \right] [11,009 - 205] + 9,091}{11,009} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{86,629 - 5,438}{2,366 - 198} \right] [10,926 - 198] + 5,438}{10,926} \right) - \right.$$

$$\left. \left(\frac{\left[\frac{92,496 - 9,091}{2,425 - 205} \right] [11,009 - 205] + 9,091}{11,009} \right) \right]$$

$$AWH_c = [33.174] + \left[(.1) \left(\frac{\left[\frac{83,405}{2,220} \right] [10,804] + 9,091}{11,009} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{81,191}{2,168} \right] [10,728] + 5,438}{10,926} \right) - \left(\frac{\left[\frac{83,405}{2,220} \right] [10,804] + 9,091}{11,009} \right) \right]$$

$$AWH_c = [33.174] + \left[(.1) \left(\frac{[37.570] [10,804] + 9,091}{11,009} \right) \right] +$$

$$\left[\left(\frac{[37.450] [10,728] + 5,438}{10,926} \right) - \left(\frac{[37.570] [10,804] + 9,091}{11,009} \right) \right]$$

$$AWH_c = [33.174] + \left[(.1) \left(\frac{405,906 + 9,091}{11,009} \right) \right] +$$

$$\left[\left(\frac{401,764 + 5,438}{10,926} \right) - \left(\frac{405,906 + 9,091}{11,009} \right) \right]$$

$$AWH_c = [33.174] + \left[(.1) \left(\frac{414,997}{11,009} \right) \right] + \left[\left(\frac{407,202}{10,926} \right) - \left(\frac{414,997}{11,009} \right) \right]$$

$$AWH_c = [33.174] + [(.1) (37.696)] + [(37.269) - (37.696)]$$

$$AWH_c = 33.174 + 3.770 - .427 = 36.517 = 36.52 = \underline{36.5}$$

The following results are obtained if the microdata are not treated atypically:

$$AWH_c = (<A> \cdot AWH_p) + (\cdot awh_p) + (awh_c - awh_p)$$

$$= (.9 \times 36.86) + (.1 \times 38.14) + (36.61 - 38.14)$$

$$= 33.174 + 3.814 - 1.53 = 35.458$$

$$= 35.46 = \underline{35.5}$$

B. Estimating Average Hourly Earnings When Some Hours and Earnings Microdata Are Treated Atypically

The basic formula for estimating average hourly earnings (AHE) given in Sec. 9.2.3.A.2 is shown again here. When atypical treatment of some hours and earnings microdata is necessary, certain terms in the formula are redefined.

$$AHE_c = (<A> \cdot AHE_p) + (\cdot ahe_p) + (ahe_c - ahe_p)$$

When atypical treatment of hours and earnings data is necessary, substitute the following for the appropriate terms in the formula above:

$$ahe_p = \frac{\left(\frac{pr_p - pr_p'}{wh_p - wh_p'} \right) (wh_p - wh_p') + pr_p'}{wh_p}$$

$$ahe_c = \frac{\left(\frac{pr_c - pr_c'}{wh_c - wh_c'} \right) (wh_c - wh_c') + pr_c'}{wh_c}$$

The basic formula used to compute the estimate of average hourly earnings for the current month (AHE_c) is modified by substituting different terms for " ahe_p " and " ahe_c " which cause the microdata selected to be treated atypically. The results of the computations done in these terms are entered into the basic formula and computations are then done in the usual manner.

The following computations are done in the substituted terms, for the previous month and for the current month:

1. The payroll total of the atypical report(s) is subtracted from the sample total for payroll to obtain the adjusted sample total for payroll excluding the atypical microdata ($pr - pr' = pr^*$).
2. The worker-hour total of the atypical report(s) is subtracted from the sample total for worker-hours to obtain the adjusted sample total for worker-hours excluding atypical microdata ($wh - wh' = wh^*$).

3. The adjusted sample total for payroll is divided by the adjusted sample total for worker-hours to obtain the adjusted sample average (hourly earnings) excluding the atypical microdata ($pr^*/wh^* = ahe^*$).
4. The worker-hour total of the atypical report(s) is subtracted from the worker-hour estimate to obtain the adjusted worker-hour estimate excluding the atypical microdata ($WH - wh' = WH^*$).
5. The adjusted worker-hour estimate is then multiplied by the adjusted sample average (hourly earnings) to obtain the adjusted payroll estimate ($WH^* \times ahe^* = PR^*$).
6. Next, the payroll total of the atypical report(s) is added to the adjusted payroll estimate excluding the atypical microdata to obtain the adjusted payroll estimate including the payroll of the atypical report(s) given only their own weight ($PR^* + pr' = PR^{**}$).
7. Finally, the adjusted payroll estimate obtained in Step 6 is divided by the worker-hour estimate to obtain the estimate of average hourly earnings adjusted for the atypical microdata ($PR^{**}/WH = AHE^{**}$).

This leads to the following formula:

$$AHE_c = [(\langle A \rangle) (AHE_p)] +$$

$$\left[(\langle B \rangle) \left(\frac{\left[\frac{pr_p - pr_p'}{wh_p - wh_p'} [WH_p - wh_p'] + pr_p' \right]}{WH_p} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{pr_c - pr_c'}{wh_c - wh_c'} [WH_c - wh_c'] + pr_c' \right]}{WH_c} \right) - \right.$$

$$\left. \left(\frac{\left[\frac{pr_p - pr_p'}{wh_p - wh_p'} [WH_p - wh_p'] + pr_p' \right]}{WH_p} \right) \right]$$

Definitions of Terms in the Formula:

AHE_p = the estimate of average hourly earnings for the previous month

AHE_c = the estimate of average hourly earnings for the current month

WH_p = the estimated weekly worker-hour aggregate for the previous month

WH_c = the estimated weekly worker-hour aggregate for the current month

$\langle A \rangle$ = Alpha, a value set between 0 and 1, inclusive, usually designated as 0.9

$\langle B \rangle$ = Beta, a value equal to $1 - \langle A \rangle$, usually equal to 0.1

pr_p = the weekly payroll total for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

pr_c = the weekly payroll total for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

wh_p = the weekly worker-hour total for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

wh_c = the weekly worker-hour total for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

ahe_p = the average hourly earnings for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

ahe_c = the average hourly earnings for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh

pr_p' = the weekly payroll total of the atypical report(s) for the previous month

pr_c' = the weekly payroll total of the atypical report(s) for the current month

wh_p' = the total weekly worker-hours of the atypical report(s) for the previous month

wh_c' = the total weekly worker-hours of the atypical report(s) for the current month

Example for AHE:Given Data:Constants:

$\langle A \rangle = .9$

$\langle B \rangle = .1$

Estimates:

$AHE_p = 6.223$

$WH_p = 405,792$

$WH_c = 387,436$

Matched Sample Data:

$pr_p = 577,594$

$pr_c = 530,344$

$wh_p = 92,496$

$wh_c = 86,629$

$ahe_p = 6.245$

$ahe_c = 6.122$

Atypical Data:

$pr_p' = 74,197$

$pr_c' = 40,739$

$wh_p' = 9,091$

$wh_c' = 5,438$

$$AHE_c = [(\langle A \rangle) (AHE_p)] +$$

$$\left[(\langle B \rangle) \left(\frac{\left[\frac{pr_p - pr_p'}{wh_p - wh_p'} \right] [WH_p - wh_p'] + pr_p'}{WH_p} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{pr_c - pr_c'}{wh_c - wh_c'} \right] [WH_c - wh_c'] + pr_c'}{WH_c} \right) - \right.$$

$$\left. \left(\frac{\left[\frac{pr_p - pr_p'}{wh_p - wh_p'} \right] [WH_p - wh_p'] + pr_p'}{WH_p} \right) \right]$$

$$AHE_c = [(0.9) (6.223)] +$$

$$\left[(.1) \left(\frac{\left[\frac{577,594 - 74,197}{92,496 - 9,091} \right] [405,792 - 9,091] + 74,197}{405,792} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{530,344 - 40,739}{86,629 - 5,438} \right] [387,436 - 5,438] + 40,739}{387,436} \right) \right]$$

$$\left(\frac{\left[\frac{577,594 - 74,197}{92,496 - 9,091} \right] [405,792 - 9,091] + 74,197}{405,792} \right)$$

$$AHE_c = [5.6007] + \left[(.1) \left(\frac{\left[\frac{503,397}{83,405} \right] [396,701] + 74,197}{405,792} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{489,605}{81,191} \right] [381,998] + 40,739}{387,436} \right) - \left(\frac{\left[\frac{503,397}{83,405} \right] [396,701] + 74,197}{405,792} \right) \right]$$

$$AHE_c = [5.6007] + \left[(.1) \left(\frac{[6.0356] [396,701] + 74,197}{405,792} \right) \right] +$$

$$\left[\left(\frac{[6.0303] [381,998] + 40,739}{387,436} \right) - \left(\frac{[6.0356] [396,701] + 74,197}{405,792} \right) \right]$$

$$AHE_c = [5.6007] + \left[(.1) \left(\frac{2,394,329 + 74,197}{405,792} \right) \right] +$$

$$\left[\left(\frac{2,303,563 + 40,739}{387,436} \right) - \left(\frac{2,394,329 + 74,197}{405,792} \right) \right]$$

$$AHE_c = [5.6007] + \left[(.1) \left(\frac{2,468,526}{405,792} \right) \right] + \left[\left(\frac{2,344,302}{387,436} \right) - \left(\frac{2,468,526}{405,792} \right) \right]$$

$$AHE_c = [5.6007] + [(.1)(6.0832)] + [(6.0508) - (6.0832)]$$

$$AHE_c = 5.6007 + .6083 - .0324$$

$$AHE_c = 6.1766 = 6.177 = \underline{6.18}$$

The following results are obtained if the microdata are not treated atypically:

$$AHE_c = (\langle A \rangle \cdot AHE_p) + (\langle B \rangle \cdot ahe_p) + (ahe_c - ahe_p)$$

$$= (.9 \times 6.223) + (.1 \times 6.245) + (6.122 - 6.245)$$

$$= 5.6007 + .6245 - .123 = 6.1022 = \underline{6.10}$$

C. Estimating Average Weekly Overtime Hours When Some Hours and Earnings Microdata Are Treated Atypically

The basic formula for estimating average weekly overtime hours given in Sec. 9.2.3.A.2 is shown again here. When atypical treatment of some hours and earnings microdata is necessary, certain terms in the formula are redefined.

$$AWOH_c = (<A> \cdot AWOH_p) + (\cdot awoh_p) + (awoh_c - awoh_p)$$

When atypical treatment of hours and earnings data is involved, substitute the following for the appropriate terms in the formula above:

$$awoh_p = \frac{\left(\frac{otwh_p - otwh_p'}{pw_p - pw_p'} \right) (pw_p - pw_p') + otwh_p'}{PW_p}$$

$$awoh_c = \frac{\left(\frac{otwh_c - otwh_c'}{pw_c - pw_c'} \right) (pw_c - pw_c') + otwh_c'}{PW_c}$$

The basic formula used to compute the estimate of average weekly overtime hours for the current month ($AWOH_c$) is modified by substituting different terms for ' $awoh_p$ ' and ' $awoh_c$ ' which causes the microdata selected to be treated atypically. The results of the computations done in these terms are entered into the basic formula and computations are then done in the usual manner.

The following computations are done in the substituted terms, for the previous month and for the current month:

1. The overtime worker-hour total of the atypical report(s) is subtracted from the sample total for overtime worker-hours to obtain the adjusted sample total for overtime worker-hours excluding the atypical microdata ($otwh - otwh' = otwh^*$).
2. The production worker total of the atypical report(s) is subtracted from the sample total for production workers reporting overtime worker-hours to obtain the adjusted sample total excluding the atypical microdata ($pw_o - pw' = pw_o^*$).
3. The adjusted sample total for overtime worker-hours is divided by the adjusted sample total for production workers reporting overtime worker-hours to obtain the adjusted sample average (weekly overtime hours) excluding the atypical microdata ($otwh^* / pw_o^* = awoh^*$).

4. The production worker total of the atypical report(s) is subtracted from the production worker estimate to obtain the adjusted production worker estimate excluding the atypical microdata ($PW - pw' = PW^*$).

5. The adjusted production worker estimate is then multiplied by the adjusted sample average (weekly overtime hours) to obtain the adjusted overtime worker-hour estimate ($PW^* \times awoh^* = OTWH^*$).

6. Next, the overtime worker-hour total of the atypical report(s) is added to the adjusted overtime worker-hour estimate excluding the atypical microdata to obtain the adjusted overtime worker-hour estimate including the overtime worker-hours of the atypical report(s) given only their own weight ($OTWH^* + otwh' = OTWH^{**}$).

7. Finally, the adjusted overtime worker-hour estimate obtained in Step 6 is divided by the production worker estimate to obtain the estimate of average weekly overtime hours adjusted for the atypical microdata ($OTWH^{**} / PW = AWOH^{**}$).

This leads to the following formula:

$$AWOH_c = [(A) (AWOH_p)] +$$

$$\left[(B) \left(\frac{\left[\frac{otwh_p - otwh_p'}{pw_p - pw_p'} \right] [PW_p - pw_p'] + otwh_p'}{PW_p} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{otwh_c - otwh_c'}{pw_c - pw_c'} \right] [PW_c - pw_c'] + otwh_c'}{PW_c} \right) - \right.$$

$$\left. \left(\frac{\left[\frac{otwh_p - otwh_p'}{pw_p - pw_p'} \right] [PW_p - pw_p'] + otwh_p'}{PW_p} \right) \right]$$

Definitions of Terms in the Formula:

$AWOH_p$ = the estimate of average weekly overtime hours for the previous month

$AWOH_c$ = the estimate of average weekly overtime hours for the current month

PW_p = the estimate of production workers for the previous month

PW_c = the estimate of production workers for the current month

$\langle A \rangle$ = Alpha, a value set between 0 and 1, inclusive, usually designated as 0.9

$\langle B \rangle$ = Beta, a value equal to $1 - \langle A \rangle$, usually equal to 0.1

pw_p = the production worker total for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh, otwh

pw_c = the production worker total for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh, otwh

$otwh_p$ = the weekly overtime worker-hour total for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh, otwh

$otwh_c$ = the weekly overtime worker-hour total for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh, otwh

$awoh_p$ = the average weekly overtime hours for the previous month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh, otwh

$awoh_c$ = the average weekly overtime hours for the current month of the current matched sample of reports reporting all of the following for both months: pw, pr, wh, otwh

$otwh_p'$ = the total weekly overtime worker-hours of the atypical report(s) for the previous month

$otwh_c'$ = the total weekly overtime worker-hours of the atypical report(s) for the current month

pw_p' = the production worker total of the atypical report(s) for the previous month

pw_c' = the production worker total of the atypical report(s) for the current month

Example for AWOH:Given Data:Constants:

$\langle A \rangle = .9$

$\langle B \rangle = .1$

Estimates:

$AWOH_p = 2.35$

$PW_p = 11,009$

$PW_c = 10,926$

Matched Sample Data:

$pw_p = 2,332$

$pw_c = 2,267$

$otwh_p = 5,603$

$otwh_c = 3,484$

$awoh_p = 2.40$

$awoh_c = 1.54$

Atypical Data:

$pw_p' = 205$

$pw_c' = 198$

$otwh_p' = 1,671$

$otwh_c' = 229$

$$AWOH_c = [(\langle A \rangle) (AWOH_p)] +$$

$$\left[(\langle B \rangle) \left(\frac{\left[\frac{otwh_p - otwh_p'}{pw_p - pw_p'} \right] [PW_p - pw_p'] + otwh_p'}{PW_p} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{otwh_c - otwh_c'}{pw_c - pw_c'} \right] [PW_c - pw_c'] + otwh_c'}{PW_c} \right) - \right.$$

$$\left. \left(\frac{\left[\frac{otwh_p - otwh_p'}{pw_p - pw_p'} \right] [PW_p - pw_p'] + otwh_p'}{PW_p} \right) \right]$$

$$AWOH_c = [(.9) (2.35)] +$$

$$\left[(.1) \left(\frac{\left[\frac{5,603 - 1,671}{2,332 - 205} \right] [11,009 - 205] + 1,671}{11,009} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{3,484 - 229}{2,267 - 198} \right] [10,926 - 198] + 229}{10,926} \right) - \right.$$

$$\left. \left(\frac{\left[\frac{5,603 - 1,671}{2,332 - 205} \right] [11,009 - 205] + 1,671}{11,009} \right) \right]$$

$$AWOH_c = [2.115] + \left[(.1) \left(\frac{\left[\frac{3,932}{2,127} \right] [10,804] + 1,671}{11,009} \right) \right] +$$

$$\left[\left(\frac{\left[\frac{3,255}{2,069} \right] [10,728] + 229}{10,926} \right) - \left(\frac{\left[\frac{3,932}{2,127} \right] [10,804] + 1,671}{11,009} \right) \right]$$

$$AWOH_c = [2.115] + \left[(.1) \left(\frac{[1.849] [10,804] + 1,671}{11,009} \right) \right] +$$

$$\left[\left(\frac{[1.573] [10,728] + 229}{10,929} \right) - \left(\frac{[1.849] [10,804] + 1,671}{11,009} \right) \right]$$

$$AWOH_c = [2.115] + \left[(.1) \left(\frac{19,977 + 1,671}{11,009} \right) \right] +$$

$$\left[\left(\frac{16,875 + 229}{10,926} \right) - \left(\frac{19,977 + 1,671}{11,009} \right) \right]$$

$$AWOH_c = [2.115] + \left[(.1) \left(\frac{21,648}{11,009} \right) \right] + \left[\left(\frac{17,104}{10,926} \right) - \left(\frac{21,648}{11,009} \right) \right]$$

$$AWOH_c = [2.115] + [(.1) (1.966)] + [1.565 - 1.966]$$

$$AWOH_c = 2.115 + .197 - .401 = 1.911 = \underline{1.9}$$

The following results are obtained if the microdata are not treated atypically:

$$AWOH_c = (<A> \cdot AWOH_p) + (\cdot awoh_p) + (awoh_c - awoh_p)$$

$$= (.9 \times 2.35) + (.1 \times 2.40) + (1.54 - 2.40)$$

$$= 2.115 + .24 - .86$$

$$= 1.495 = 1.50 = \underline{1.5}$$

9.4 REVISIONS OF HOURS AND EARNINGS ESTIMATES

9.4.1 Revising Data for the Previous Month

The hours and earnings estimates computed for the current month using incomplete sample totals are preliminary figures based upon the summary of hours and earnings microdata in the current matched sample. Shortly before computing the preliminary hours and earnings estimates for the current month, more complete sample totals are obtained for the previous month. These augmented sample totals are then used to compute the revised estimates for the previous month. These estimates are published at the same time as the preliminary estimates for the current month. Any current-month computations using previous-month data are done using the revised sample totals and the revised estimates for the previous month.

9.4.2 Interim Revisions

Revisions of hours and earnings estimates done since the last benchmark revision for any months preceding the previous month are called interim revisions. They are made necessary at times because of the receipt of late reports and/or corrections to reports already received.

Such revisions are usually not introduced into published series until the next adjustment of employment estimates to new benchmark levels. However, they are normally used in the recomputation of subsequent estimates.

Interim revisions of hours and earnings estimates are published on a current basis when a revised estimate differs from an earlier one by 3.5% or more for average hourly earnings (AHE), or by one (1) hour or more for average weekly hours (AWH), at any published level. This is usually done in a footnote.

9.4.3 Revisions Caused by Changes in the Production Worker Weights

The adjustment of employment series to new benchmark levels will occasionally change the distribution of the weights (PW estimates) for hours and earnings enough to affect the published hours and earnings estimates. If the employment estimates for a series are revised at benchmark adjustment time, recompute the hours and earnings estimates using the revised production worker estimates as weights.

Before comparing the old and the new estimates, the data based on the old benchmarks are updated with any new information (late reports, corrections, new firm data, etc.) which may have become available. Then the two series (old and new) are compared; if any published data change by more than one percent (1%), then the hours and earnings estimates are revised to the new levels.

The steps necessary to revise hours and earnings estimates to new levels are:

1. Substitute the new estimate for the benchmark month (March) at the basic cell level.
2. Wedge back the difference between the new benchmark estimate and the old benchmark estimate at no more than 0.5% per month for a maximum of twelve (12) months beginning with the new benchmark month (March).
3. Revise the postbenchmark series by recomputing the estimates forward using the new weights (PW estimates) as well as new information that will affect the hours and earnings estimates.

9.4.4 Revisions Caused by Wedge Adjustments

A published hours and earnings series may need to be revised, even though the comparable employment series does not, if there has been a "final" closing wedge adjustment in a basic cell. (See Sec. 9.2.3.D.)

In such a case, the hours and earnings estimates at the published level for March of the benchmark period are: (1) recomputed; (2) tested for a change of more than 1%, and, if necessary; (3) the published series are revised in a manner similar to that set forth in Sec. 9.4.3. (In this case, the weights (PW estimates) do not change, but the basic cell estimates do.)

9.5 COMPUTING ANNUAL AVERAGES FOR HOURS AND EARNINGS ESTIMATES

Annual averages are computed each year as shown below for each hours and earnings series, i.e., all cells (basic and summary).

1. Average Weekly Hours (AWH): Add the estimated weekly worker-hour aggregates for each of the twelve months in the year and divide the resulting total by the total of the comparable production worker estimates for the same twelve-month period.
2. Average Hourly Earnings (AHE): Add the estimated weekly payroll aggregates for each of the twelve months in the year and divide the resulting total by the comparable twelve-month total of the estimated weekly worker-hour aggregates.
3. Average Weekly Earnings (AWE): The annual average is the product of the annual averages computed in Steps 1 and 2, i.e., $AWE_{aa} = AWH_{aa} \times AHE_{aa}$.

4. Average Weekly Overtime Hours (AWOH): Add the estimated overtime worker-hour aggregates for each of the twelve months in the year and divide the resulting total by the total of the comparable production worker estimates for the same twelve-month period.

Note: Do not publish simple twelve-month averages for hours and earnings series, i.e., annual averages computed by adding the twelve monthly estimates for the year (AWH, AHE, AWE, AWOH) and dividing by twelve.

9.6 DERIVATIVE SERIES

9.6.1 Introduction

Several hours and earnings series in addition to those already covered may be derived from the worker-hour and payroll data collected on the BLS 790 schedules. Each State is encouraged to prepare and publish these series whenever possible.

The following derivative series are discussed below:

1. The Index of Aggregate Weekly Worker-hours (WHI).
2. The Index of Aggregate Weekly Payrolls (PRI).
3. Average Hourly Earnings Excluding Overtime (HEEO).

If such series are published, appropriate revisions of each series must be made available to the public at the same time that the general revisions of the basic series are published.

9.6.2 The Indexes of Aggregate Weekly Worker-hours and Payrolls

Estimates of weekly worker-hour aggregates (WH) and weekly payroll aggregates (PR) are derived as part of the hours and earnings weighting procedure. They are published only in index form in order to avoid misinterpretation or misuse of the data. Although the aggregates are on a weekly basis, they could be misread as being on a monthly basis.

A State must use the same base period for the indexes as that used by the BLS for the national indexes of this type.

The Index of Aggregate Weekly Worker-hours

The index of aggregate weekly worker-hours (WHI) is computed by dividing the estimated weekly worker-hour aggregate for the current month by the annual average of the estimated weekly worker-hour aggregates for the

base year and then multiplying the result by 100. Currently, the base year is 1977.

This procedure can be expressed as a formula:

$$WHI_c = (WH_c / WH_b) (100)$$

Where:

WHI_c = the index of aggregate weekly worker-hours for the current month

WH_c = the estimated weekly worker-hour aggregate for the current month

WH_b = the annual average of the estimated weekly worker-hour aggregates for the base year (the total of the twelve monthly aggregates divided by twelve).

Example:

$$\begin{aligned} WHI_c &= WH_c / WH_b (100) \\ &= (522,300/489,200)(100) = 1.0677 \times 100 \\ &= \underline{106.77} \end{aligned}$$

The Index of Aggregate Weekly Payrolls

The index of aggregate weekly payrolls (PRI) is computed by dividing the estimated weekly payroll aggregate for the current month by the annual average of the estimated weekly payroll aggregates for the base year and then multiplying the result by 100. Currently, the base year is 1977.

This procedure can be expressed as a formula:

$$PRI_c = (PR_c / PR_b) (100)$$

Where:

PRI_c = the index of aggregate weekly payrolls for the current month

PR_c = the estimated weekly payroll aggregate for the current month

PR_b = the annual average of the estimated weekly payroll aggregates for the base year (the total of the twelve monthly aggregates divided by twelve)

Example:

$$\begin{aligned} \text{PRI}_c &= (\text{PR}_c / \text{PR}_b)(100) \\ &= (2,592,290 / 1,988,200)(100) = 1.3038 \times 100 \\ &= \underline{130.38} \end{aligned}$$

9.6.3 Average Hourly Earnings Excluding Overtime

Average hourly earnings excluding overtime (HEEO) may be computed and published by the States for certain manufacturing industries. This series is based upon the assumption that overtime work is generally paid for at the rate of time-and-one-half, i.e., the normal pay rate multiplied by 1.5. This is done by dividing the estimated weekly payroll aggregate for the current month (which includes overtime pay) by the sum of the estimated weekly worker-hour aggregate for the current month (which includes overtime hours) and one-half (1/2) of the estimated weekly overtime worker-hour aggregate for the current month.

This procedure can be expressed as a formula:

$$\text{HEEO}_c = \frac{\text{PR}_c}{\text{WH}_c + [(.5) (\text{OTWH}_c)]}$$

Where:

HEEO_c = the estimate of average hourly earnings excluding overtime, for the current month

PR_c = the estimated weekly payroll aggregate for the current month

WH_c = the estimated weekly worker-hour aggregate for the current month

OTWH_c = the estimated weekly overtime worker-hour aggregate for the current month

NOTE: The denominator in the formula represents the time-and-one-half; the division in the formula excludes the overtime earnings.

Example:

$$\begin{aligned} \text{HEEO}_c &= \frac{\text{PR}}{\text{WH}_c + [(.5)(\text{OTWH}_c)]} \\ &= \frac{434,235}{85,800 + [(.5)(17,160)]} = \frac{434,235}{85,800 + 8,580} \\ &= 434,235 / 94,380 = \underline{4.60} \end{aligned}$$

Average hourly earnings excluding overtime (HEEO) may be published for:

- . Total Manufacturing
- . Durable Goods (Mfg.)
- . Nondurable Goods (Mfg.)
- . the two-digit industry groups in manufacturing

Three- and four-digit industries in manufacturing are not published for this series, nor are any nonmanufacturing industries.

Exhibit 9-A: Size Strata Worksheet
(See Sec. 9.2.1.B.2)

BM-March 19__		BLS Sample Data - March 19__							
Size	No. of		No. of						
Class	Reports	AE	Reports	ae	pw	wh	pr	pw/ae	
								(5) / (4)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<u>8-Strata</u>									
0-9	43	180	3	16	13	517	4,141	.813	
10-19	44	636	7	110	94	3,779	27,549	.855	
20-49	62	1,935	15	500	435	17,705	131,725	.870	
50-99	27	1,848	11	773	687	27,480	202,802	.889	
100-249	17	2,708	8	1,312	1,161	46,904	406,658	.885	
250-499	8	2,793	5	1,938	1,715	70,830	622,596	.885	
500-999	4	2,946	4	2,946	2,516	102,150	949,995	.854	
1,000+	6	12,775	6	12,775	10,642	439,515	4,008,377	.833	
Total	211	25,821	59	20,370	17,263	708,880	6,353,843	-	
<u>2-Strata</u>									
0-99	176	4,599	36	1,399	1,229	49,481	366,217	.878	
100+	35	21,222	23	18,971	16,034	659,399	5,987,626	.845	
Total	211	25,821	59	20,370	17,263	708,880	6,353,843	-	

Exhibit 9-A (cont.)

Size Class	Sample Averages			Estimated Aggregates			Estimated Averages	
	-----		PW Estimate (8) x (2)	-----		PR (12) x (10)	-----	
	awh 6) / (5)	ahc (7) / (6)		WH (11) x (9)			AWH (12) / (11)	AHE (13) /
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
8-Strata								
0-9	39.77	8.010	146	5,806	46,506	X	X	
10-19	40.20	7.290	544	21,869	159,425	X	X	
20-49	40.70	7.440	1,683	68,498	509,625	X	X	
50-99	40.00	7.380	1,643	65,720	485,014	X	X	
100-249	40.40	8.670	2,397	96,839	839,594	X	X	
250-499	41.30	8.790	2,472	102,094	897,406	X	X	
500-999	40.60	9.300	2,516	102,150	949,995	X	X	
1,000+	41.30	9.120	10,642	439,515	4,008,377	X	X	
Total	41.06*	8.963*	22,043	902,491	7,895,942	40.94**	8.749	
2-Strata								
0-99	40.26	7.401	4,038	162,570	1,203,181	X	X	
100+	41.13	9.080	17,933	737,584	6,697,263	X	X	
Total	41.06*	8.963*	21,971	900,154	7,900,444	40.97**	8.777**	

*unweighted sample average

**weighted estimated average

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 9
Rev. Oct. 1985

Final Closing Review Sheet
(See Sec. 9.2.3.D)

Data Type: _____ *

Year: _____

	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sept.	Oct.	Nov.	Dec.
Cell-ID:												
S. Avg.												
Estimate												
Diff.												
Z Diff.												
Cell ID:												
S. Avg.												
Estimate												
Diff.												
Z Diff.												
Cell ID:												
S. Avg.												
Estimate												
Diff.												
Z Diff.												
Cell ID:												
S. Avg.												
Estimate												
Diff.												
Z Diff.												
Cell ID:												
S. Avg.												
Estimate												
Diff.												
Z Diff.												

*AMH, AHE, or AMOH

CURRENT EMPLOYMENT STATISTICS MANUAL

SECTION 9
Rev. Oct. 1985Exhibit 9-C
Wedge Computation Worksheet
(See Sec. 9.2.3.D)

Month/Year: _____

Wedge Type: _____ *

Data Type S. Avg. Estimate Total Diff. Avg. Diff. Wedge Rev. Est.

Cell-ID: _____

1st mo. _____

2nd mo. _____

3rd mo. _____

Cell-ID: _____

1st mo. _____

2nd mo. _____

3rd mo. _____

Cell-ID: _____

1st mo. _____

2nd mo. _____

3rd mo. _____

Cell-ID: _____

1st mo. _____

2nd mo. _____

3rd mo. _____

Cell-ID: _____

1st mo. _____

2nd mo. _____

3rd mo. _____

*1st-month, 2nd-month, or 3rd-month wedge

Exhibit 9-D

Final Closing Comparison Report for Average Hourly Earnings

(See Sec. 9.2.3.D)

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SECTION 9
Rev. Oct. 1985

Run Date: 12/12/80

<u>Month</u>	<u>Year</u>	<u>Closing</u>	<u>Cell-ID</u>	<u>Sample AHE</u>	<u>Estim. AHE</u>	<u>Diff.</u>	<u>Percent Diff.</u>	<u>+ - 3%</u>	<u>+ - 1%</u>
07	80	F	337225	7.012	6.907	0.105	1.5		
08	80	F	337225	7.032	6.923	0.109	1.6		
09	80	F	337225	7.029	6.919	0.110	1.6		
07	80	F	337245	6.734	7.017	0.283	-4.2	*	
08	80	F	337245	6.651	6.934	0.283	-4.3	*	
09	80	F	337245	6.893	7.244	0.351	-5.1	*	
07	80	F	337285	7.421	7.629	0.208	-2.8		
08	80	F	337285	7.501	7.733	0.232	-3.1	*	
09	80	F	337285	7.467	7.693	0.226	-3.0	*	

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Section 10: PREPARING ALL EMPLOYEE BENCHMARKS**10.1 INTRODUCTION****10.1.1 All Employee Benchmarks and Their Relationship to the Current Estimates**

A benchmark is defined in the CES survey as a reasonably complete count of the number of all employees in an industry at a specific point in time. The preparation of a benchmark establishes the all employee level for the industry. Then the month-to-month all employee sample trends are applied to the benchmark (or the subsequent estimates based on the benchmark) to obtain the current monthly all employee estimates for the industry.

After a period of time, these estimates may depart from the true all employee levels. This may be caused by: changes in industry, ownership, or area classification, the opening or closing of nonsample establishments, sampling or response errors, or the modification of benchmark source data. For some industries, a departure from the true all employee levels may occur because the current estimates are not sample-based. It is necessary to establish new all employee benchmarks periodically in order to test the accuracy of the all employee estimates and to indicate the levels to which inaccurate estimates will be adjusted.

10.1.2 The Benchmark Month and the Frequency of Benchmark Preparation

The benchmark month is March. Prepare new benchmarks once each year beginning about September. Prepare benchmark data for March and for the preceding months back to the previous benchmark month.

NOTE: Information on the frequency and timing of the revision of the CES estimates to new benchmark levels and the subsequent switchover to the new levels is located in Sec. 11.1 and in App. H.2.

10.1.3 Sources of Benchmark Data

The principal source of benchmark data for the CES survey is the ES-202 Report. The Report is based on employment data reported to State Employment Security (ES) agencies by: (1) employers covered by State Unemployment Insurance (UI) laws, and (2) Federal Government installations covered by the Unemployment Compensation for Federal Employees (UCFE) program. These data, when supplemented by non-UI benchmark data for industries or parts of industries not covered under UI laws, constitute complete all employee benchmarks for most industries. Sometimes modifications must be made to the UI data to account for industry, ownership, or area differences and other factors.

Periodically, the State agencies conduct surveys to establish all employee benchmarks when these benchmark data are not available from other sources. Groups may be surveyed in different years, although a few may need to be surveyed every year. Often, State surveys are necessary in order to establish all employee benchmarks for areas.

10.1.4 Scope of Section 10

Section 10 covers the preparation of all employee benchmarks. Sec. 10.2 describes the UI employment data, while Sec. 10.3 covers the preparation of all employee benchmarks based on the UI data. Sec. 10.4 discusses benchmarks for industries which are not covered or are only partially covered by the UI program, or which are partially covered but require special adjustments to meet the needs of the CES survey. A step-by-step summary of benchmark-related activities is provided in Exhibit 10-A: The CES Annual Benchmark Activities Checklist.

10.2 DESCRIPTION OF UNEMPLOYMENT INSURANCE (UI) DATA

10.2.1 The ES-202 Report

Every employer subject to a State's UI laws is required to furnish a "Report of Employment, Wages, and Contributions" to the State Employment Security (ES) agency each quarter. Among the data items on this report are the employment data for the pay period which includes the 12th of the month for each month in the quarter. Since these reports are usually made in conjunction with tax payments (contributions) to the State's unemployment insurance fund, they are often called contribution reports.

Contribution report data from individual establishments are summarized by county to industry levels each quarter in a tabulation called the ES-202 Report. This report shows, by four-digit industry, the number of reporting units, the employment data for each month in the quarter, total wages and salaries, taxable wages and salaries, and the amount of taxes (contributions) due. These industry groupings are summarized by ownership code--government (federal, State, local, and international or foreign) or private. (Instead of using the private ownership code, the State may use the optional designations of private corporate and private noncorporate.) For the first quarter of each calendar year, the employment and wage data are also tabulated within each industry according to the size of the reporting unit based on the March employment level.

These summary data are made available to State and national CES personnel for use in preparing the all employee benchmarks. State CES personnel, who in most States are part of the State ES agency which prepares the ES-202 Report, also have access to the individual UI account data, i.e., the microdata submitted on the UI contribution reports. (The ES-202 tabulations prepared in connection with the UCCE program are covered in Sec. 10.4.11.C.)

10.2.2 Characteristics of the UI Employment Data

Certain characteristics of the UI employment data are noted here because of their possible impact on the ability to obtain all employee benchmarks which conform with the definitions used in the CES survey. These characteristics include:

A. Continuity Provisions

The ES-202 Report is compiled quarterly and provides employment data useful in time series analysis. Noneconomic code changes are introduced following the fourth quarter of the calendar year. Thus the first quarter report has the most up-to-date industry code assignments.

B. Industry Exclusions

Certain industries and some special categories of employees may not be covered or may be only partially covered by State UI laws. Among the special categories of employees are: nonoffice salespersons, religious organizations, working students and working spouses of students employed by the educational institution they attend, and the interns and trainees of hospitals, except student nurses. (For a more complete discussion of noncovered employees, see the latest version of the State's UI laws; also see Sec. 10.4.1 and Sec. 13.4.8.) Obtain all employee benchmark data from non-UI sources for those types of noncovered employees that fall within the scope of the CES survey (see Sec. 10.4).

C. Delinquency Provisions

Some employers submit contribution reports too late for their data to be included in the ES-202 Report for the current quarter. The State ES agencies have been instructed to estimate employment for such reporters and to include these estimates in the ES-202 Report's totals. The ES-202 Manual contains specific instructions for making these estimates and indicates how many quarters may be estimated. (See Sec. 0427 of the ES-202 Manual.)

D. Maximum Income Exclusions

A worker's wages are no longer subject to UI taxation after the worker has earned the maximum taxable income (\$6,000 in most States). Sometimes employers fail to include these workers in their employment figures. This may result in employment figures which are too low, particularly in the third and fourth quarters of the calendar year.

10.2.3 Reasons for Using March as the Benchmark Month

The principal reasons for using March as the benchmark month are: (1) most industry code changes are made effective in the UI data at the beginning of the calendar year (see Sec. 10.3.3.C.2), (2) the effect of maximum income exclusion misinterpretations is at a minimum in the first calendar quarter, and (3) industry data are available on the ES-202 Report by size of establishment in the first calendar quarter for the States that use size breakouts.

10.3 PREPARING ALL EMPLOYEE BENCHMARKS USING UI DATA

10.3.1 Selecting the Benchmark Levels to Be Prepared

A first-quarter ES-202 Report includes employment by county by industry (4-digit) and, within each industry, employment by size category (9 classes). Some combination of this vast amount of detail is necessary when preparing benchmark tabulations for States and areas. The lowest level of industry or industry size category selected is called a basic estimating cell (or a basic cell).

When selecting basic estimating cells, the primary stratification is to be by industry at the finest detail that can be supported adequately by the existing CES sample. Basic cells must contain at least 15 establishments or cover at least 75 percent of the cell's universe employment. If a cell's sample does not meet these requirements at the 4-digit level in manufacturing, or the 3-digit level in nonmanufacturing, combine the cell with another similar cell. If individual SIC breakouts are not possible, attempt to combine SIC's with homogeneous products or services. If problems are encountered in meeting these criteria, a residual cell may be created.

Size stratification may produce significantly better estimates for some industries. To determine if size stratification is feasible for an industry, it is first necessary to determine if an industry can be broken down into its component industries at the next lower level (e.g., to determine if the sample for a 10-digit industry is sufficient to support one or more 3-digit industry cells, or combinations of 3-digit industries into cells, and, if necessary, a residual cell.) If the industry cannot successfully be broken down further, then size stratification may be considered. If the industry can successfully be broken down further, then it is necessary to determine the possibility of breaking it down still further to the next lower level (e.g., to determine if the sample for a 3-digit industry is sufficient to support one or more 4-digit industry cells, or combinations of 4-digit industries into cells, and, if necessary, a residual cell.)

Once the lowest industry level at which the sample is sufficient to produce satisfactory estimates has been determined, consider feasibility of size stratification at that industry level. (Residual or "combination" cells may be considered for size stratification automatically, since by their nature they cannot be broken down further by industry.) Certain criteria must still be met before an industry can be stratified by size. Each of the size strata selected must have an adequate and stable level of sample coverage, i.e., each size stratum must contain at least 15 establishments or cover at least 75 percent of the stratum's universe employment. Finally, if the size strata have met the sample coverage criteria, size stratification may be used only if it produces significantly better estimates for the industry. (For additional information on size stratification, especially as it pertains to hours and earnings data, see Sec. 9.2.1.)

In addition to selecting basic cells using the ES-202 Report, prepare separate benchmarks for certain additional industries in order to arrive at a benchmark level for total nonagricultural employment. These industries are the noncovered or partially covered industries such as railroads, religious organizations, and other industries described in more detail in Sec. 10.4.

10.3.2 A Summary of the Procedures Used to Derive All Employee Benchmarks

The procedures used to derive all employee benchmarks using UI data after basic cells have been determined are briefly summarized here; they are described in more detail in the following sections. The principal part of an all employee benchmark for a basic cell is the ES-202 employment figure for the benchmark month. However, review the CES and UI macrodata for the entire period from the previous benchmark month through the current benchmark month. A difference listing such as that described in Sec. 11.2.2 will facilitate this review. Correct the cell totals for keying and tabulating errors; the omission or duplication of data; industry, ownership, or area classification changes; and for multiestablishment reporters. Investigate, resolve, and incorporate differences in the employment microdata on CES and UI reports. The result of these procedures is the best possible benchmark level for the benchmark month based on all currently available information.

10.3.3 Benchmark Tabulations

A. Use and Timing

All employee benchmarks are based on tabulations of the UI microdata. These tabulations facilitate checking for UI-CES differences in reporting patterns, industry, ownership, and area classifications, and the employment figures. Since both UI and CES reports' identification

information includes the employer's UI account number, it is used to match CES and UI reporters. This common identification number permits an analyst to check for industry, ownership, and area code discrepancies. It also allows one to check for differences in the employment data reported to each program.

A tabulation of this nature may be used for editing the UI microdata on a continuing basis throughout the year. This permits UI-CES differences to be minimized initially and reduces the time needed to verify these differences later. Coordination of this activity between the State CES and ES-202 staffs will result in more accurate data and less time spent by the two staffs resolving differences. Resolve differences between programs for the same establishment so that the State CES staff is not making the same adjustments to the UI data every quarter. The BLS Regional Office will assist when a State's ES-202 and CES units cannot agree on what is most correct.

Produce the benchmark tabulation as soon as possible after the ES-202 first quarter is produced (about September first) so that the revisions of the CES estimates to the new benchmark levels can be incorporated with the estimates for January.

B. Format and Geographic Coverage

1. Format

List all UI accounts on the benchmark tabulation for each basic estimating cell. Although the format of the benchmark tabulation may vary somewhat from State to State, the following information is to be shown for each account: the UI account number, the industry, ownership, and area codes, and the employment data. The total number of reporting units and the total employment figures are also to be shown for each basic cell.

In the benchmark tabulation, treat each separate part of a multi-industry or multiarea firm as a separate reporting unit. Also include all amended and supplemental data. List the accounts within each basic cell by SIC, by size, by UI account number. This allows the tabulation to be used as a sampling frame (see Sec. 3.1.4.A).

2. Geographic Coverage

Normally, produce separate benchmark tabulations -- one for Statewide and one for each area. However, if data processing time is at a premium, either kind may serve both purposes as follows:

- a. The Statewide tabulation may be used as the basic record of individual reports. After this tabulation has been produced, a tabulation by area, by industry, can be made for area use.

- b. The area tabulations may be used as the basic record of individual reports. Then the comparable industry employment totals for each area and for the "balance of State" can be combined to obtain Statewide totals.

If the areas for which CES estimates are made represent a relatively small proportion of the total Statewide employment, the first method may be preferable. However, if these areas represent a relatively large proportion of total Statewide employment, the second method may be more economical in terms of data processing time.

3. Distributing Multiarea Reports

Regardless of which type of tabulation is prepared for area benchmark purposes, adjust for multiarea firms with employment data which are not broken out by area, and for firms which furnish area data to the UI program which do not fit the CES area definitions. List the information for these firms separately, by industry. Distribute the employment by area using the most feasible of the methods listed below.

- a. If a firm submits satisfactory all employee data by area on BLS 790 reports, enter these data onto the benchmark tabulations in place of the UI employment data.
- b. The State ES agency may request an employer to report by county, or similar division, as recommended in Sec. 0425.F of the ES-202 Manual. If a multiarea firm will not report by area every quarter, it may be possible to obtain a breakdown of employment by area for one quarter each year. Obtain these data for the benchmark quarter if possible, otherwise the employment data obtained for another quarter can be used to distribute the data proportionately in the benchmark quarter.
- c. The records of the local offices of the State ES agency may be a source for area employment data.
- d. Try to determine whether an establishment of a multiarea firm is located in a particular area. Check the telephone and/or city directory for the area, it may then be possible to obtain the employment data by contacting the establishment.

C. Editing Benchmark Tabulations1. General Instructions

Benchmark tabulations for States and for areas are edited in much the same manner. One means of editing benchmark tabulations is to use the Benchmark Control Card (SO-221) discussed in Sec. 13.4.4 and shown in Appendix C, p.6. However, whenever possible, this editing should be automated.

Carefully edit benchmark tabulations for various kinds of errors, for example: keying and tabulating errors, duplication of reports, reporting the same employment figure for each month in a quarter, and reporting employment for only one or two months in a quarter. For each area, check the tabulation for the erroneous inclusion of reports for establishments located outside of the area, and for the erroneous exclusion of reports for establishments located inside the area.

If a report for a large establishment was delinquent when the ES-202 Report was prepared, figures will have been estimated for it. If the report is subsequently received, substitute the reported employment figures for the estimated figures on the tabulation.

If an establishment's employment figures are questionable, and no revised data have been received by the State ES agency since the preparation of the benchmark tabulation, substitute employment data from another source (if they are available), preferably the BLS 790 report. Otherwise, estimate employment data for a large establishment by taking into account the last correctly reported employment figures for the establishment and the employment trends in other large establishments in the industry. For a small establishment (fewer than 50 employees) repeat the last correctly reported employment figure for each month in the benchmark quarter.

2. Supplemental Editing Materials

Certain supplemental materials prepared routinely by the State ES agencies are helpful in editing benchmark tabulations. They include:

a. Comments Supplements

A Comments Supplement containing comments on unusual employment trends shown on the ES-202 Report is due either 2 weeks after the submission of the ES-202 Report or 2 weeks after the due date of the Report, whichever is later. (See Section 0428 in the ES-202 Manual which covers this supplement and provides examples of various comments.) State CES units need to obtain copies of these Comments Supplements so that they can be used when analyzing the reported employment data.

b. Coverage Supplements

If covered employment increases or decreases during a quarter because of a change in wording or official interpretation of State or federal UI laws, submit a Coverage Supplement as an attachment to the Comments Supplement. The Coverage Supplement provides the information necessary to understand the effects of changes in the coverage provisions of the UI laws on the makeup of the quarterly report. (See Sec. 0428.B of the ES-202 Manual which covers this material in detail.)

c. Coding Supplements

Coding Supplements contain all of the noneconomic industry and ownership code changes that are reflected on the ES-202 Report for the first quarter as being made effective at the beginning of the new calendar year. (See Sec. 0428.C of the ES-202 Manual which covers this material in detail.) Noneconomic industry, ownership, and county code changes are the result of changes in the coding structure, corrections of erroneous codes, and actual changes which either occurred over more than 30 days or cannot be pinpointed in time. Coding Supplements are due by August 31 each year, either accompanying or preceding the ES-202 Report for the first quarter. State CES units need to obtain copies of the Coding Supplements.

d. Economic Code Changes

Economic industry and ownership code changes are made effective as near as possible to the time that the change in activity or ownership took place. Such code changes must first be approved by the BLS Regional Office. Report economic code changes in the Comments Supplement when a significant change in employment for an industry, ownership category, or county will result.

10.3.4 Comparing Benchmark Tabulations

Compare the current benchmark tabulation to the one for the previous year in order to determine whether any significant UI accounts are missing from the current tabulation, and whether any have been included in it that were not in the one for the previous year. If so, check further to determine whether, if missing, they have successor accounts or the companies have closed permanently; or, if added, whether they are successor accounts or new businesses; or if there was an industry code change. Examine all reports with 100 or more employees in the first quarter of either year in every industry. The minimum size of reports to be checked varies from industry to industry, but in all instances the cutoff is set sufficiently low to ensure comparability between the previous and current benchmarks.

10.3.5 Comparing CES and UI Microdata to Find and Resolve Significant Differences

A. General

Establishments participating in the CES survey and the UI program are expected to provide comparable data to both. However, this is not always done. Compare CES and UI microdata to find and resolve significant differences. This comparison can be made manually by using the Benchmark Control Card (SO-221) (see Sec. 13.4.4 and Appendix C, p. 6). Whenever possible, this procedure should be automated. The example of a difference listing comparing CES and UI macrodata in Sec. 11.2.2.A can be adapted to the automated CES-UI microdata comparison needed here.

Since comparable CES and UI reporters are assigned a common UI account number, it is used to match establishments and to compare their employment data and their industry, ownership, and area codes. Employment differences should be small or nonexistent provided that the CES and UI reports cover the same establishments, classes of workers, and reporting period. Minor differences are ignored.

If the CES and UI employment figures for the benchmark period are significantly different for an establishment, determine why and adjust the UI data if necessary. Compare CES and UI data for all establishments reporting an employment figure of 100 or more; enter those with significant discrepancies onto the Classification Adjustment Check Form (SO-207). (See Sec. 10.3.6.B.)

B. Major Causes of CES-UI Microdata Differences

Among the major causes of differences between CES and UI microdata are:

1. Different Establishment, Industry, or Area Coverage

These differences fall into the following categories:

- a. The CES report covers fewer locations than the UI report. In this case, if the industry codes are identical, no adjustment of the UI data is necessary.
- b. A combined CES report is equivalent to a number of UI accounts. No adjustment of the UI data is needed. However, if the UI accounts are in different industries or areas, attempt to obtain comparable CES reports.

- c. The CES reports are provided in finer industry/area detail than the equivalent UI reports. In such cases, adjust the UI data the basis of the CES reports. Also adjust the area benchmarks if the CES reports correspond to the basic area definition. (Sec. 10.3.3.B.3 covers the procedure to follow when the CES reports do not provide a satisfactory area distribution.) Ask the State ES-202 staff obtain future UI data in CES industry/area detail, if possible. Coordination between the State CES and ES-202 staffs will result in more efficient operations for both programs.

2. Different Industry or Area Codes for the Same Establishment

The CES and UI reports cover the same establishment but are classified in different industries or areas. Establishments are classified according to the most recent data available on the UI program's Industrial Classification Statement (BLS-3023). No classification statement, except those for government installations, is supposed to be more than 3 years old. (See Sec. 2.2.3 of the CES Manual and Secs. 0425 and 0426 of the ES-202 Manual.) The BLS Regional Offices will assist States in determining correct industry code assignments.

3. Different Classes of Employees Covered

A report to one program may include or exclude a class of employees which the comparable report to the other program does not. If a CES report does not include a group of these employees, even though it should, and the UI report properly includes them, then it is not necessary to adjust the UI data. However, attempt to get the respondent to include these employees in their CES report data. Conversely, the CES report may properly include classes of employees which are not included on the UI report since they are not covered by UI (e.g., insurance agents on a straight commission basis who may be classified by a State's UI law as self-employed workers, a noncovered category). Since complete counts of such groups of workers are usually added to the UI data for an entire industry (see Sec. 10.4), the UI microdata are not adjusted.

4. Miscellaneous Differences

Miscellaneous differences may be caused by the inclusion of employees on strike, reporting data for the wrong pay period, etc. When the UI data are incorrect, adjust the ES-202 Report's totals. When the CES data are incorrect, a note is entered on the benchmark worksheet.

10.3.6 CES-UI Industry, Ownership, and Area Classification Differences

A. Adjusting Benchmark Data

To promote comparability, it is essential that each CES reporter have the same industry, ownership, and area classifications as its comparable UI reporting unit. Consequently, if the CES-UI microdata comparison called for in Sec. 10.3.5 discloses differences, change the classifications of the CES reporters to agree with the classification being used for the comparable UI reporting units as of the time that the benchmarks are being prepared from UI data for the first quarter. This will result in benchmarks which reflect the most accurate industry, ownership, and area classifications possible.

By the time that the new benchmarks are being prepared, most of the Industrial Classification Statements (BLS-3023 forms) sent to refiling reporting units should have been received and reviewed by the State's ES-202 unit (see Sec. 2). All necessary classification changes indicated by that review will be listed on the coding supplements which the CES unit should receive at benchmark time. The most accurate area and ownership classifications are therefore incorporated when the benchmarks are prepared.

When an incorrect industry, ownership, or area code is found, correct the microdata and adjust the affected totals accordingly.

B. Reporting Differences to BLS

In order to achieve agreement between the industry and ownership codes for CES reporters and their equivalent UI reporting units, identify those cases which have codes or reporting units that differ. While preparing the national benchmarks, BLS-Washington adjusts the ES-202 Report totals for these CES-UI classification differences. The States are required to provide BLS with this information each year on Classification Adjustment Check (SO-207) forms so that the national benchmarks can be prepared properly.

Prepare SO-207 forms for coding differences occurring in any of the 4-digit industries covered by the two programs. The CES codes reported are those in effect when the forms are being completed. The UI codes reported are those used in the ES-202 Report for the first calendar quarter. Also include establishments with ownership codes that differ on SO-207 forms.

The States are expected to enter pertinent information in the "Comments" section of the SO-207 form. These comments should explain how industry, ownership, and employment discrepancies were handled for the State's benchmarks.

Even though the States were once asked to report CES-UI industry code differences when the CES code was incorrect, even if the UI code was correct, it is no longer necessary to enter information for an establishment on an SO-207 form if the CES code is incorrect and the UI code needs no adjustment. However, the States are expected to correct the CES code as soon as possible.

When completing an SO-207 form for a company, a State is expected to include all CES and UI units that report to the State. In most cases, the total UI employment for a company will exceed the total CES employment for the company. In cases where the total UI employment reported for a company is significantly less than the total CES employment reported for the company, it is very important to explain this occurrence. It is also necessary to explain what industry and employment adjustments, if any, must be made to the ES-202 Report data sent to BLS-Washington by the State.

The States are expected to include any comments which will aid in matching reports when there is a difference in the CES-UI coding patterns. The States are also expected to comment on the disposition of discrepancies which occurred in this comparison a year earlier but which do not appear again this year. Include such references in the State's covering memorandum.

One copy of the SO-207 form is prepared for each single-unit firm which:

- a. provided a single CES report and a single UI report,
- b. had employment of 100 or more reported to either program in at least one month of the first calendar quarter, and
- c. has a current CES industry or ownership code that differs from the UI industry or ownership code used in the ES-202 Report for the first calendar quarter.

In addition, one SO-207 form is prepared for each multiunit firm which:

- a. provided separate reports on its various activities to either program,
- b. classified at least one of the multiunit reports differently for industry or ownership in the CES survey than in the UI program, and
- c. reported 100 or more employees in at least one month of the first calendar quarter for the unit with the classification discrepancy.

Exhibits 10-B and 10-C indicate the use of the SO-207 form for different types of reporting patterns in the CES survey and the UI program.

The completed SO-207 forms are due in the BLS Regional Office each year by January 15th. Subsequently, they are reviewed and transmitted by the Regional Office to BLS-Washington by January 31st. A CES Technical Memorandum with specific instructions is sent to the States and the regional offices each year by the end of summer.

10.4 PREPARING ALL EMPLOYEE BENCHMARKS FOR INDUSTRIES NOT COVERED OR ONLY PARTIALLY COVERED BY THE UI PROGRAM

10.4.1 Introduction

This section covers all employee benchmark preparation procedures for industries which are not covered or are only partially covered by the UI program. Non-UI sources of benchmark data are indicated for a number of industries. Recommendations are made regarding the estimating cell structure for certain industries. The 790 State Benchmark Information (SO-270) form itemizes these industries and provides a means for the States to report the all employee benchmark figures used in the preparation of State and area figures for noncovered industries to BLS. (See Sec. 13.4.8 and Appendix C, p. 23.) The completed SO-270 forms are due in the BLS Regional Office each year by January 15th. Subsequently, they are reviewed and transmitted by the Regional Office to BLS-Washington by January 31st.

10.4.2 Railroad Transportation (SIC 40)

A. Industry Subdivisions

Certain subclassifications of the SIC codes for railroads are necessary for benchmarking and estimating purposes. Railroads (SIC 401) is divided into three groups:

1. Class I: companies with annual operating revenues generally \$50 million or more
2. Class II: companies with annual operating revenues generally less than \$50 million, but exceeding \$10 million
3. Class III: companies with annual operating revenues generally \$10 million or less.

All switching and terminal establishments (SIC 4013) are designated as Class III railroads regardless of their operating revenues. In addition, unless provided otherwise, all electric railroad companies are designated as Class III railroads regardless of their operating revenues. Line-haul operating railroads (SIC 4011) are generally allocated among the three classes based on the level of their annual operating revenues.

Except for a few interurban railways, all of the establishments in Railroad Transportation (SIC 40) are subject to the provisions of the Railroad Retirement Act and the Railroad Unemployment Act.

Note:

1. Effective January 1, 1978, the classification is:
Class I: \$50 million or more
Class II: less than \$50 million, but in excess of \$10 million
Class III: less than \$10 million
2. In 1976 and 1977 the classification was:
Class I: \$10 million or more
Class II: under \$10 million
3. Between 1965 and 1975 the classification was:
Class I: \$5 million or more
Class II: under \$5 million
4. From 1956 through 1964 the classification was:
Class I: \$3 million or more
Class II: under \$3 million
5. Prior to January 1, 1956, the classification was:
Class I: \$1 million or more
Class II: more than \$100,000, but less than \$1,000,000
Class III: under \$100,000
6. Railroad companies are classified on the basis of a three-year average of operating revenues.
7. Beginning with 1980, Class III railroads were no longer required to file annual reports with the ICC.
8. Beginning with 1981, Class II railroads were no longer required to file annual reports with the ICC.

B. Class I Railroads

BLS-Washington provides State and area all employee benchmarks for March for the Class I companies to the States in odd-numbered years in computer-produced tabulations. They are transmitted to the States and to the BLS regional offices as attachments to a CES Technical Memorandum and are to be incorporated into Appendix A.2 of the Manual. The tabulations show employment data for each individual company for the pay period including the 12th of the benchmark month. The tabulations also show summaries of the data by State and by area. The all employee benchmark data for Class I companies are listed in four sequences:

1. State by Railroad
2. State by County by Railroad
3. State by Area by Railroad
4. Multistate Areas

The Class I tabulations are based on reports of individual railroad establishments to the Association of American Railroads. The companies report their employment in each State and in selected areas according to pay delivery points. Factors from the reports for each company are multiplied times the employment reported by the company to the Interstate Commerce Commission (ICC) in order to obtain the all employee benchmark data for the railroad for each State and area in which it operates. The States may carry as constants the employment figures for railroads with 50 or fewer employees in their State and area benchmarks.

BLS-Washington provides monthly all employee data for the Class I railroad companies to the States. Use these data at benchmark time if the State did not include them in its monthly estimates. (See Sec. 8.6.2.)

C. Class II Railroads

Benchmark data for Class II railroads are no longer available from the Interstate Commerce Commission (ICC). Therefore the States are expected to develop local sources for this benchmark information.

D. Class III Railroads

The States are expected to develop local sources of benchmark data for Class III railroads. A list of these establishments is issued periodically as an attachment to a CES Technical Memorandum. This list is to be incorporated into Appendix A.2 of the Manual and used primarily for sample solicitation purposes. It includes employment and line information when available. Note that some Class III establishments are also active CES sample reporters. The recommended collection vehicle for this all employee benchmark information is the BLS 790 D schedule for Transportation, Communication, and Public Utilities.

10.4.3 Insurance (SIC 63)

Nonoffice commissioned insurance salespersons are covered by UI in only five States--California, Iowa, Nevada, New York, and Wyoming. However, this group is, by definition, included in the scope of the CES survey. County Business Patterns (CBP) includes them in Life Insurance (SIC 631). State and area all employee benchmarks for nonoffice commissioned insurance salespersons may be based on CBP data. CBP figures for insurance carriers minus the UI figures for insurance carriers will give the figures for nonoffice commissioned insurance salespersons. This group is included in the all employee estimates of the CES survey, but it is not included in the estimates for nonsupervisory workers or the estimates of hours and earnings because no payroll information is available for them.

10.4.4 Real Estate (SIC 65)

Nonoffice commissioned real estate agents are, by definition, not included in the scope of the CES survey. The twelve States which do have UI coverage for this group should use the UI figures without any adjustments for this group. The other States should also refrain from making any adjustments for it.

10.4.5 Educational, Religious, and Charitable Trusts (SIC 6732)

Educational, Religious, and Charitable Trusts (SIC 6732) are not covered by UI. The industry is covered by social security. All employee benchmarks can be determined using data from the most recent County Business Patterns (CBP). Add the benchmark information for SIC 6732 to the benchmark information for the appropriate basic estimating cell.

10.4.6 Rental of Railroad Cars (SIC 474)

A small segment of Rental of Railroad Cars (SIC 474), consisting of companies renting railroad cars which are controlled directly or indirectly by railroad companies, is subject to the provisions of the Railroad Retirement Act and the Railroad Unemployment Insurance Act instead of the regular State UI programs.

Periodically, BLS-Washington provides the States with all employee benchmark data, by State and area, for these companies (see Appendix A.3). Add these data to the regular UI benchmark data for SIC 474.

The national benchmark for these establishments is based on their reports to the Interstate Commerce Commission (ICC). For State and area benchmarks, some establishments are benchmarked using CES microdata. For other establishments in this segment, allocate employment by State and area in accordance with the distribution of employment in Class I railroads.

10.4.7 Hospitals (Private, State Government, or Local Government)

Most interns and trainees and some student nurses appear on the payrolls of the hospitals (private, State government, or local government) to which they have been assigned. The American Hospital Association Guide provides data on their numbers for the States and areas. Because of their student status they are not covered by unemployment insurance (UI) in 31 States. Include intern and trainee data in the CES benchmarks for hospitals. However, exclude student nurses from these benchmarks since they are not counted as employed in the CES survey even though they may be paid for their services.

10.4.8 Educational Services (Private, State Government, or Local Government)

Students who are on the payroll of a school, college, or university (private, State government, or local government) while enrolled and regularly attending classes at such an educational institution are covered by UI in only two States. Spouses of such students employed in a comparable manner are covered by UI in 16 States. An estimate of the number of working students and spouses can be made by soliciting data from the institutions involved. The State's UI laws must be reviewed carefully in order to determine the UI coverage accurately. (An example of a special State survey form is shown in Exhibit 10-D.)

Employees of church-related schools which are not incorporated separately are exempt from UI coverage. Since this exemption occurred between the second and third quarters of 1981, an indication of the number of employees in this category may be obtained by comparing the employment levels of the two quarters.

10.4.9 Social Services (SIC 83)

Handicapped persons who are employed in a facility which specifically operates programs for such persons (i.e., sheltered workshops such as Goodwill and the Lighthouse for the Blind) are not covered by unemployment insurance (UI). These persons receive regular paychecks from these facilities, however, they do not receive custodial care as do inmates of mental hospitals who perform work. Therefore, in the CES survey they are counted as employed. Since these persons are subject to social security taxes, they are counted in the employment data in County Business Patterns (CBP). Derive benchmark employment figures for this group by obtaining the differences between the CBP figures and the UI figures for SIC 833: Job Training and Vocational Rehabilitation Services.

10.4.10 Membership Organizations (SIC 86)

Since Religious Organizations (SIC 866) constitute the major portion of Membership Organizations (SIC 86) and are only partially covered by UI, a separate basic estimating cell is usually established for SIC 866.

Religious Organizations (SIC 866) Derive these all employee benchmarks using data from the National Council of Churches, the National Catholic Welfare Council, the U.S. Department of Commerce's Bureau of the Census, and from special State surveys. (An example of a special State survey form is shown in Exhibit 10-E.)

Other Membership Organizations (SIC 861-5.9) Included in Business Associations (SIC 861) and Labor Unions and Similar Labor Organizations (SIC 863) are railroad labor and employer associations which are covered for social insurance purposes by the Railroad Retirement Act. The figure for this segment of SIC 86 can be projected to the current benchmark month by the trend of all employees in Railroad Transportation (SIC 40). Add the data for the railway labor and employer associations to the UI data for the appropriate basic cell in order to obtain the total benchmark figure for the cell.

10.4.11 The Federal Government

A. The Nature of the Establishments Included

The Federal Government segment of Government is defined so that it includes all of the Federal installations in the executive, legislative, and judicial branches regardless of the nature of the activities performed. Thus government shipyards, hospitals, and arsenals are included as well as post offices, military installations, and general government offices. Assign federal installations an ownership code of "10" for classification purposes.

B. Definition of Federal Government Employment

The all employee figures for the Federal Government represent the number of persons who occupied civilian positions during the pay periods specified and who were paid for personal services rendered to the Federal Government regardless of the nature of their appointment or method of payment. The all employee data exclude persons serving without compensation, persons on leave without pay for the entire pay period, persons on leave status after a reduction in force (RIF), casual workers (i.e., persons working at irregular intervals), and persons employed on work relief projects. For all Federal agencies except the Department of Defense, all employee data represent the number of full-time, part-time, and intermittent civilian employees who worked during or received pay for any part of the pay period which includes the 12th of the month.

For the Department of Defense, the all employee figure represents the total number of full-time and part-time civilian employees on the rolls on the last day of the month plus the number of intermittent employees who rendered service at any time during the month. (This number is the same as the one reported to the U.S. Office of Personnel Management on Standard Form 113A.)

C. Use of UCFE Program Data

Benchmarks for State and area all employee estimates for the Federal Government are based on the ES-202 tabulations prepared in connection with the Unemployment Compensation for Federal Employees (UCFE) program. The State ES agencies are required to prepare an ES-202 Report each quarter showing State data on the civilian employment of the Federal Government by industry. In addition, many States regularly prepare comparable tabulations by area. If a State does not prepare such area tabulations, it is expected to make arrangements to obtain these data for benchmark purposes.

BLS-Washington uses the data compiled by the U.S. Office of Personnel Management (OPM) for the national civilian employment series for the Federal Government. Comparable series for the Washington, D.C., metropolitan area are also based on OPM definitions. Figure 10.1 lists the major differences in coverage between the OPM and UCFE data. In general, it is not necessary to adjust the UCFE data for the groups excluded, since the number of employees involved is usually not large.

A detailed description of the exclusions from the UCFE program is given in the annual House of Representatives document entitled "Compilation of the Social Security Laws, Including the Social Security Act as Amended, and Related Enactments Through December 31" (see under Selected Provisions of 85, Unemployment Compensation, Sec. 8501, "Definitions").

In addition to coverage differences, the OPM data cover persons employed as of the last day of the month, while UCFE data (except for the Department of Defense) include persons employed during the pay period which includes the 12th of the month.

Figure 10.1

Major Differences in Coverage Between OPM's Federal Government Employment Data and the UCFE Program's Federal Government Employment Data

Agencies or Activities Covered by UCFE but Not by OPM 1/

1. Nonappropriated funds activities -- Army, Navy, Air Force
2. Army and Air Force Motion Picture Service
3. Army and Air Force Exchange Service
4. Employees of County Agricultural Stabilization and Conservation Committees and State and Area Marketing Committees
5. Agricultural Extension Service employees serving under a Federal appointment

Workers Covered by OPM but Not by the UCFE Program

1. Elective officers in the executive branch and the legislative branch of the Federal Government
2. Workers excluded by Executive Order from the Civil Service retirement system because they are paid on a contract or fee basis
3. Interns, student nurses, and other student employees of Federal hospitals; patient employees in a hospital, home, or other Federal Institution 2/

Agencies Covered by UCFE but Their Employment Data Not Reported to the State Agencies

1. Federal Bureau of Investigation (FBI) 3/
2. Central Intelligence Agency (CIA) 4/
3. National Security Agency (NSA) 4/

1/ Prior to January 1969, civilian employees of the National Guard and the Air National Guard were included in this category and were counted as State government employees in the CES national series. Beginning with January 1969 data, OPM and the CES national series have classified them as Federal employees.

2/ Patient employees of the Veterans Administration were excluded from OPM data by Public Law 87-574, effective December 1962.

3/ Included in the national totals for the Department of Justice

4/ Employment data also excluded from OPM reports

10.4.12 State and Local Government

Beginning with the first quarter of 1978, the coverage of the UI program was extended to almost all State and local government employees, making the UI program the major source of benchmark data for these employees. Therefore these data are included in the ES-202 Report.

Elected officials and nominal employees of State and local governments are covered by the CES survey but not by the UI program. The nominal employees include paid volunteer firefighters and other paid temporary emergency workers. Obtain benchmark data for these groups of employees by subtracting the UI data from the data in the Census of Governments prepared by the Bureau of the Census of the U.S. Department of Commerce.

Benchmarking information concerning student nurses and the interns and trainees of State or local government hospitals is located in Sec. 10.4.7. Such information concerning students and their spouses working for the State or local government educational institution that they attend is located in Sec. 10.4.8.

The CES Annual Benchmark Activities Checklist

Exhibit 10-A

The following is a step-by-step summary of the activities involved in preparing and evaluating the annual benchmarks for the CES State and area all employee estimates. These activities are covered in greater detail in Sections 10 and 11 of the Manual. This checklist serves as a sequential guide for completing the annual benchmark processing. The worksheets and reference data may be computer-generated or posted by hand depending on the extent of automation in the State agency.

1. Post 15 months of unadjusted UI macrodata for each CES basic estimating cell. (Begin with the data for the January preceding the previous benchmark month and continue through the current benchmark month.) Look for significant over-the-month changes in employment and for significant changes in the number of reporting units. A significant change in either of these must be investigated, verified, and fully documented. The posting and review of the UI data are to be done on an ongoing basis, i.e., as each quarter's data are received. Give special attention to changes between quarters, e.g., June to July, September to October, etc., and explain them in your comments. (The ES-202 cross quarter edit error tabulations may be helpful here. See Sec. 0508.B of the ES-202 Manual.)
2. Post adjustments to the UI data (such as the addition of UI microdata for one quarter, or monthly adjustments for nonreported data). If necessary, attach supplemental sheets to the benchmark worksheet. Include in this group, employers exempt from UI coverage in industries normally covered by UI.
3. List any adjustments to the UI data for industry/ownership code changes on a supplemental sheet and total them for each month. (This is done so that a quick review of the month-to-month benchmark adjustments can easily be made.)
4. Post the CES all employee estimates based on the previous benchmark for the period from the previous benchmark month through the current benchmark month.

5. Prepare a list of strikes by basic CES estimating cell for the benchmark revision period using Reports on Work Stoppages (ES-228) and prepare a comparable list of temporary shutdowns using Reports of Significant Layoffs (ES-235). Show the company name, the beginning and ending dates of the action, and the number of workers involved. Review the CES and UI data to determine whether this information is correctly reflected in each program. Post any adjustments which are needed on the benchmark worksheet. Be sure to document any problems and note any adjustments which are being made with this benchmark revision.
6. Prepare a list, by basic CES estimating cell, of noneconomic code changes which are included in the UI data for the first quarter of the current calendar year.
7. Compare CES sample reporters with UI reporting units to determine whether the continuity of any of the following has been broken: industry code, ownership code, area code, and employment level. Post related comments/adjustments on the benchmark worksheet. Prepare Classification Adjustment Check (SO-207) forms and submit to Regional Office by January 15th.
8. Compare the CES all employee estimates based on the previous benchmark and the UI employment data, and explain any significant differences. Enter the explanations on the benchmark worksheet or on an attached supplemental sheet.
9. Post the benchmark data for industries which are not covered by UI using the results of special industry surveys, etc. Prepare 790 State Benchmark Information (SO-270) form on presumed noncovered employment and submit to Regional Office by January 15th.
10. Construct the all employee benchmark figures for the current benchmark month (March). Industries with benchmarks based on special surveys, etc., must have their data and techniques fully documented.
11. Determine whether the CES all employee estimates based on the previous benchmark or the UI employment data will be used as the base for the current benchmark revisions.

12. Wedge out any differences caused by noneconomic code changes in the CES all employee estimates or the UI employment data, if necessary.
13. Post the proposed revised series on the benchmark worksheet. Begin with the data for the January preceding the previous benchmark month and continue through the current benchmark month.
14. Identify the industries that you believe should be deleted from the existing estimating cell structure and list the reasons for the proposed changes.
15. Identify the series which you propose to start publishing. Establish an historical base of at least one year for each of these series.
16. Identify series which you propose to suspend from publication.
17. Ensure that whenever hours and earnings series are published the comparable employment series are also published.
18. Add delinquent microdata to the monthly CES employment tabulations and re-estimate the women worker and production worker ratios.
19. Using the new all employee benchmarks and the updated women worker and production worker ratios, determine the revised women worker and production worker estimates.
20. Add delinquent microdata to the monthly CES hours and earnings tabulations and re-estimate these series; use the revised production worker estimates as weights.

REPORTS FOR WHICH AN SO-207 FORM IS PREPARED

Exhibit 10-B

<u>CES Reports</u>	<u>UI Reports</u>	<u>Remarks</u>
1. Single unit; complete coverage	Single unit; UI industry code and/or ownership code different from CES codes	
2. CES report is a single report which does not cover all of a firm's activities	UI receives single report covering all of a firm's activities; CES and UI industry codes differ	Explain the omission from the CES report if possible.
3. CES report has area breakdowns; all reports	Combined report; UI industry code different from CES code	Show each CES report separately. (Needed for benchmarks by size.)
4. Combined report; complete coverage	UI reports include breakdown; all reports in the same industry; UI industry code different from CES code	Show UI employment for each report. (Needed for benchmarks by size.)
5. CES reports cover separate reports in two or more different industries; complete coverage	Combined report	
6. CES report includes industry breakdown	UI reports show a different industry breakdown	
7. CES report covers only part of the activities of the firm	UI reports show industry breakdown; UI industry code for portion reported to CES is different from the CES code	
8. Combined report; complete coverage	UI reports show industry breakdown; CES report is coded in a different industry from any shown in UI breakdown; or the majority of UI employees are in a different industry from the CES report	

MULTIUNIT REPORTS FOR WHICH AN SO-207 FORM IS NOT REQUIRED EXHIBIT 10-C

<u>CES Reports</u>	<u>UI Reports</u>
1. Separate reports by area; all reports coded in the same industry	Single report (or smaller number of reports than CES); UI industry codes are identical
2. Combined report (or smaller number of reports than UI)	Separate reports by area; all reports are coded in the same industry; CES and UI industry codes are identical
3. Combined report; complete coverage	UI receives industry breakdown; CES report coded in the same industry as the majority of employees in all of the UI reports

SPECIAL STATE SURVEY FORM -- EDUCATIONAL SERVICES

Exhibit 10-D

Dear Employer:

The West Carolina Department of Labor, in cooperation with the U.S. Department of Labor's Bureau of Labor Statistics, is responsible for producing current employment data, by industry, for the State of West Carolina and the metropolitan areas within the State. Most of our employment data are obtained from unemployment insurance records. Since employment for education provided by local government is only partially covered by unemployment insurance, we do not have a record of your current total employment.

Please enter in Column (1) below the total number of employees (both full-time and part-time) who worked or received pay for your March 1985 pay period which includes the 12th of the month. INCLUDE all teaching and nonteaching personnel, employees such as substitute teachers, employed students, bus drivers, janitors, office workers, and cafeteria workers who are enrolled in pay status as well as persons on paid leave. EXCLUDE unpaid student workers, board members, pensioners, contractors, and their employees.

In Column (2) enter only the number of regular full-time teachers. In Column (3) enter the number of students (both full-time and part-time) employed by the school who worked or received pay for that period. In Column (4) enter the number of substitute teachers who worked during the March 1985 pay period.

The employment totals may be entered on the enclosed copy of this letter and returned in the enclosed self-addressed envelope.

Thank you very much for your cooperation.

Yours truly,

JOHN BROWN, Chief
Research and Statistics

(1)	(2)	(3)	(4)
<u>Total Employment</u> Full-time and part-time, both faculty and students	Total Regular Faculty (full-time)	Total Employed Students (full- time and part- time	Total Substitute Teachers
March 1985			

SPECIAL STATE SURVEY FORM -- RELIGIOUS ORGANIZATIONS

Exhibit 10-E

Dear Employer:

The West Carolina Department of Labor is responsible for producing current industrial employment statistics for the State of West Carolina and the metropolitan areas within the State. Since religious organizations are not covered by unemployment insurance, we do not have a record of your current employment.

Please enter in the space provided at the end of this letter the number of employees (both full-time and part-time) in the religious organization to which this letter is addressed. A return envelope is provided for your convenience in returning this information.

Please include:

1. All salaried officials and/or clergy
2. Members of religious orders performing work but not receiving direct monetary compensation
3. Other employees (both full-time and part-time; both salaried and hourly)

The criteria above should include but not necessarily be limited to:

Clergy	Musical Staff
Clerical Staff	Nursery Attendants
Custodians	Others receiving pay <u>except</u> as indicated
Housekeepers	

Please do NOT include:

1. Casual labor not usually done in the course of a religious organization's activities
2. Contractors (i.e., janitorial, repair, or other services which are paid for on a contractual basis)
3. Pensioners
4. Recipients of token remuneration or honorariums, such as soloists or a guest minister
5. Unpaid volunteers

Thank you very much for your cooperation.

Sincerely,

PAT SMITH, Chief
Research and Statistics

Enclosures: Return Envelope
File Copy

<u>Denominational Affiliation:</u>	
<u>March 1985 Employment</u>	
Full-time:	_____
Part-time:*	_____
Total:	_____

* For part-time workers, include only those scheduled to work less than 35 hours per week

Section 11: REVISING CES ESTIMATES TO NEW BENCHMARK LEVELS

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Section 11: REVISING CES ESTIMATES TO NEW BENCHMARK LEVELS11.1 INTRODUCTION

Once each year, after the new all employee benchmark levels have been prepared (see Sec. 10.1.2), the CES estimates are revised to new benchmark levels. The switchover to these new levels will normally be scheduled to occur in February of the following year in conjunction with the States preliminary closing for January (see App. H.2).

After the all employee benchmark levels have been prepared in accordance with the material presented in Section 10, and the CES final closing all employee estimates based on the previous benchmark have been updated as necessary with significant new data, they are compared. If there are significant differences in level, the UI macrodata, adjusted as necessary, are selected as the new benchmark levels. The estimates are revised to the new levels in the interbenchmark period by using a replacement procedure and/or a percentage or arithmetic wedging procedure, depending on the circumstances, and in the postbenchmark period by using a projection procedure. In addition, the trends of the CES estimates, updated as necessary with significant new data, and the UI macrodata, adjusted as necessary, are compared and any significant differences are resolved. If no significant differences in level or trend are noted, the updated CES estimates may be selected as the new benchmark levels.

After the new all employee benchmark data have been selected, and the revisions made, it is necessary to revise the estimates dependent on the all employee data -- women workers, production workers, and hours and earnings data. In addition, nonsample-based estimates are re-evaluated at this time.

Note: Statements in Section 11 referring to UI macrodata also apply to benchmark data from other sources for industries not covered by UI.

11.2 SELECTING UI OR CES ALL EMPLOYEE DATA AS THE NEW BENCHMARK LEVELS

11.2.1 Updating the Existing CES Estimates

Before comparing the CES and UI data, review all CES estimates based on the previous benchmark in the light of any significant new data or information that have become available since the estimates were prepared. Any revisions indicated by such significant data or information are made at the basic cell level first.

Apply these revisions to each type of data prepared for a cell (e.g., all employees, women workers, production workers, average weekly earnings, average weekly hours, average hourly earnings, and average weekly overtime hours). After basic cell estimates are updated, revise summary cell estimates accordingly. Employment, payroll, and worker-hour data for summary cells may also be affected.

For example, a significant CES report has been habitually late and not included in the sample when the regular monthly estimates were prepared. The establishment pays higher wages and works more hours than other sample establishments in its basic cell. Including this establishment's data in the sample at benchmark time will change the estimates of hours and earnings for the basic cell and may also change hours and earnings estimates for summary cells.

Technically, only all employee estimates are benchmarked. However, the other types of estimates are subject to revision because they are based in part on the all employee estimates. CES estimates must be updated when a significant nonsample establishment is closed, when a significant strike has been handled improperly, or when significant reports were received too late to be included in the sample on which the estimates were based.

The scope of the geographic coverage is revised periodically. From time to time, the U.S. Office of Management and Budget (OMB) changes the definitions of various metropolitan statistical areas (MSA). If such a change affects an MSA for which a State publishes data, and resources permit, introduce the new definition at the next benchmark revision and adjust the estimates accordingly. If possible, each new series is to be carried back to the same beginning date as the series it supercedes. At a minimum, historical continuity must be maintained at the division level and above. During the periodic Standard Industrial Classification (SIC) revisions, it is also necessary to maintain continuity whenever possible. Special instructions are issued at the time of area or SIC revisions in order to facilitate this process.

11.2.2 Comparing Adjusted UI Macrodata Levels and Updated CES Estimate LevelsA. Comparing the Levels

After the all employee benchmarks have been prepared, compare the updated CES estimate levels based on the previous benchmarks with the adjusted UI macrodata levels. This comparison is performed for the interbenchmark period, i.e., the period from the previous benchmark to the new benchmark. Compare the macrodata for all basic cells. The easiest way to perform this comparison is to prepare a tabulation that shows: (1) the adjusted UI macrodata, (2) the updated CES estimates, (3) the actual differences, and (4) the percent differences calculated by dividing the actual difference by the adjusted UI macrodata and multiplying the result by 100. (This tabulation is commonly referred to as a difference listing.) The adjusted UI macrodata are considered to be the base; the updated CES estimates are subtracted from this base. Graphing is highly recommended as an additional useful way to compare the UI and CES data.

EXAMPLE OF A DIFFERENCE LISTING

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.
UI Data	125.3	125.1	125.4	126.4	125.4	124.7	125.8	125.9
CES Data	125.3	125.1	125.4	126.1	126.3	124.2	125.5	126.1
Diff.	0	0	0	.3	-.9	.5	.3	-.2
% Diff.	0	0	0	.2	-.7	.4	.2	-.2

	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
UI Data	127.8	128.8	131.0	133.4	129.6	128.6	127.7
CES Data	126.3	127.4	129.7	131.6	127.4	126.1	125.1
Diff.	1.5*	1.4*	1.3*	1.8*	2.2*	2.5*	2.6*
% Diff.	1.2	1.1	1.0	1.3	1.7	1.9	2.0

Note: The first March is the previous benchmark month; the second March is the new benchmark month; from April through the second March is the interbenchmark period; the months with an asterisk (*) would use the UI data for replacement based on the replacement criteria provided later in Sec. 11; however, if the UI data are acceptable, the State may replace all months in the interbenchmark period in order to avoid partial revisions in that period.

B. Determining Which Data to Revise

When only the ES-202 Report for the first quarter is available, use the data for March to determine whether a series needs to be revised. A series is revised if:

- 1) the CES data differ from the UI data by $\pm$ 2 percent or more and the difference is more than 100 employees, or
- 2) the CES data differ from the UI data by $\pm$ 1,000 or more employees.

These criteria are first applied at the basic cell level. If the difference is less than $\pm$ 2 percent, but the actual number of employees differs by 1,000 or more, revise the series.

These criteria are not applied at the division level unless the division is a basic estimating cell. In all other cases, the revised division level totals are always equal to the sum of the component cells (revised as necessary).

Insignificant revisions are to be avoided. Revisions that change a published series slightly only a few months here and there when those changes are caused mainly by rounding differences do not improve the estimates and are troublesome to the users of the data. However, minor changes in summary cell estimates are acceptable if they are the result of offsetting adjustments which were necessary in the basic cells that aggregate into the summary cell.

Data for the previous benchmark month and the months preceding it are not to be revised by either replacement or wedging except in the case of a very large noneconomic code change that cannot be handled in any other way. Revising such previously benchmarked data becomes a disservice to the users of our data if it is done more often than necessary.

11.2.3 Comparing Adjusted UI Macrodata Trends and Updated CES Estimate Trends

To ensure that the month-to-month movements of each series (i.e., the trends) are measured properly, in addition to determining the proper levels, make a comparison between the trends of the updated CES estimates and the adjusted UI macrodata trends during the interbenchmark period. This comparison is made regardless of whether the level of the estimates requires adjustment (see Sec. 11.2.2.B). Use the adjusted UI macrodata or their trends to revise the estimates for all, or part of, the interbenchmark period. In addition, compare the CES and UI data at turning points in the business cycle to be sure that the peaks and troughs are identified correctly. The comparability of the CES and UI trends during the interbenchmark period can be ensured by replacing the CES estimates with the adjusted UI macrodata. Again, graphing the CES and UI data for basic and summary cells will help in determining the comparability of the CES and UI trends and will be helpful in analysis.

One measure of the adequacy of the estimates' trends is obtained by expressing the difference between the two benchmark month figures (UI and CES) as a percentage of the change in the UI data over the year. Where significant noneconomic code changes have occurred, the adjustments for them should be excluded when using the formula below.

$$G = [(Un - Cn)/(Un - Up)] [100]$$

where: G = the growth measurement statistic

Un = the adjusted UI macrodata for the new benchmark month (March)

Up = the adjusted UI macrodata for the previous benchmark month

Cn = the updated CES estimate for the new benchmark month

The results can help to determine the adequacy of the sample in measuring the growth (or decline) of the all employee estimate in a basic cell.

Example

Given: Un = 64.0

Up = 60.0

Cn = 62.5

$$G = [(Un - Cn)/(Un - Up)] [100]$$

$$G = [(64.0 - 62.5)/(64.0 - 60.0)] [100]$$

$$G = (1.5/4.0) (100) = (.375)(100) = \underline{37.5\%}$$

The result is an approximation of the percentage of growth of an industry that was not picked up by the sample. If it is consistently shown that an industry's sample does not adequately reflect the growth (or decline) taking place, it may be necessary to expand the sample, to use bias adjustment factors, or to revise the estimating cell structure. It is advisable to rank series based on their growth measurement statistic, G. Those series having a relatively high value of G may need a sample expansion or a revised stratification.

Note: G is not a good measure when there has been little change in employment over the year, that is, when $(Un - Up)$ approaches zero (see the example below).

Example

Given: $Un = 64.0$ $Un = 63.5$ $Cn = 62.5$

$$G = [(Un - Cn)/(Un - Up)] [100]$$

$$G = [(64.0 - 62.5)/(64.0 - 63.5)] [100]$$

$$G = (1.5/0.5)(100) = (3.0)(100) = \underline{300\%}$$

An alternative to using the growth measurement statistic, G, to determine the adequacy of the estimates' trends is to use the D-link technique described in Exhibit 11-A.

11.2.4 Using Updated CES Estimates as the New Benchmark Levels

If the difference between the adjusted UI macrodata for the new benchmark month (March) and the updated CES estimate for the same month for a cell is too small to warrant adjustment, and the same is true for the months in the interbenchmark period, the CES series is considered to be revised, assuming that any serious differences between the CES and UI trends have been investigated and resolved. The updated CES estimate for March is then considered to be the new benchmark for the series. Add this new benchmark to the new benchmarks for other cells to obtain new benchmarks for any summary cells of which it is a part.

11.3 REVISING ALL EMPLOYEE ESTIMATES TO THE NEW UI LEVELS

If the criteria in Sec. 11.2.2.B indicate that it is necessary to revise the updated CES estimate levels for a series to the adjusted UI macrodata levels, use one of the procedures discussed below (replacement and/or wedging). The preferred benchmark adjustment procedure is to replace the CES estimates with the adjusted UI macrodata. The replacement procedure involves replacing figures for some or all of the months in the interbenchmark period. The wedging procedures are primarily used to adjust for noneconomic industry code changes that are incorporated in the ES-202 Report for the first quarter.

11.3.1 Replacing or Wedging in the Interbenchmark Period

If it is necessary to revise a series' updated CES estimate levels to the adjusted UI macrodata levels in accordance with Sec. 11.2.2.B, it is done by: (1) revising each affected basic cell, and (2) summing the basic cells' figures into the affected summary cells.

For each basic cell, one of the following procedures is used for the interbenchmark period.

Procedure 1: Replacing Updated CES Estimates with Adjusted UI Macrodata

Substitute adjusted UI macrodata for the updated CES estimates for the months that require replacement. Data are normally replaced for a period of months (e.g., the entire interbenchmark period, the summer months, etc.). Do not replace single, scattered months. Previously benchmarked data may not be replaced except in the case of noneconomic code changes exceeding 6 percent at the published level. (See Sec. 11.3.4.)

Procedure 2: Wedging a Replacement Series

A wedge is a set of monthly adjustments which taper out the difference between two figures. (See Sec. 11.3.2.A.) This type of wedging is used when significant noneconomic industry or ownership code change(s) are reflected in the ES-202 Report for the first quarter and, in addition, there are other significant differences between the CES and UI series. This type of wedging is covered in detail in Sec. 11.3.2 and is summarized below.

There are two basic types of "replacement" wedges -- the "nine-month" wedge and the "twelve-month" wedge. For a nine-month wedge, the first step is to replace the estimates for January, February, and March with the UI figures that include the noneconomic code change(s). Then the difference between the two UI figures for December -- i.e., the figure including the code change(s) and the level not including the code change(s) -- is wedged back through the April following the previous benchmark month (March).

For a twelve-month wedge, the series is wedged back beginning with the UI figure including the noneconomic code change(s) for the new benchmark month. In this case, it is necessary to estimate the UI levels not including the code change(s) for January, February, and March using the December data. First, the UI figure not including the code change(s) is divided by the UI figure including the code change(s). Next, the resulting ratio is multiplied times the UI levels including the code change(s) for January, February, and March in order to obtain estimates of the UI levels not including the code change(s) for those months. Then the difference between the two March figures -- i.e., the figure including the code change(s) and the estimated level not including the code change(s) -- is wedged back through the April following the previous benchmark month (March).

If the total amount to be wedged is 4.5 percent or less, use a nine-month wedge. (A shorter wedging period may be used when the difference between the two December figures is relatively small.) If the total amount to be wedged is greater than 4.5 percent, but not greater than 6 percent, use a twelve-month wedge. If the total amount to be wedged is greater than 6 percent, a wedge longer than twelve months may be used, even though this will result in the revision of previously benchmarked data. (See Sec. 11.3.4.)

Normally, a wedge for published series should not exceed 0.5 percent per month. Replacement wedges exceeding this level are acceptable for unpublished series only if they do not affect any published series.

Procedure 3: Wedging a Series of Updated CES Estimates

This type of wedging is used when significant noneconomic industry or ownership code change(s) are reflected in the ES-202 Report for the first quarter and, in addition, the adjusted UI macrodata in the interbenchmark period are questionable, or there is no significant difference between the CES and UI series other than that caused by the noneconomic code change(s). This type of wedging is covered in detail in Sec. 11.3.2 and is summarized below.

First, for the new benchmark month (March), replace the updated CES estimate with the adjusted UI figure. Then, wedge the difference between these two figures back through the April immediately following the previous benchmark month (March). Normally, the figure for the previous benchmark month remains unchanged.

A shorter wedging period may be used if the difference being wedged back is relatively small for the new benchmark month. A wedge should not extend back before the April following the previous benchmark month unless noneconomic industry or ownership code change(s) exceed 6 percent. (See Sec. 11.3.4.)

Normally, a wedge for a published series should not exceed 0.5 percent per month. Wedges exceeding this percentage and longer than twelve months are acceptable for unpublished series if they do not affect any published series.

Incorporate true economic industry or ownership code changes that can be identified by month and year in the appropriate series when they occurred. Wedge code changes that cannot be identified by month and year.

11.3.2 Using the Wedging Procedures

A. Introduction

A wedge is a set of monthly adjustments which taper out the difference between two figures. When wedging a replacement series, these figures are the UI figure including the noneconomic code change(s) and the UI level not including the noneconomic code change(s) (both for the December preceding the new benchmark month, March). When wedging a series of updated CES estimates, these figures are the adjusted UI figure and the updated CES estimate (both for the new benchmark month, March). The difference between the two figures is assumed to have accumulated at a regular rate during the wedging period.

Two types of wedging procedures are available to adjust all employee data. The percentage wedge procedure is covered in Sec. 11.3.2.B; the arithmetic wedge procedure is covered in Sec. 11.3.2.C.

For industries with sizeable seasonal fluctuations or other temporary or unusual fluctuations such as strikes, it is better to use a percentage wedge because it will distort the month-to-month trends less than an arithmetic wedge. An arithmetic wedge is only used when the employment in the interbenchmark period shows only slight month-to-month fluctuations or the total amount to be wedged is quite small.

The descriptions of the wedge calculations are presented using a wedging period of 9 or 12 months when wedging a replacement series and a wedging period of 12 months when wedging a series of updated CES estimates. However, as indicated in Sec. 11.3.1, Procedure 2, Step b, the length of the wedging period may vary depending on the circumstances.

B. Using a Percentage Wedge**1. Wedging a Replacement Series**

This method assumes that the percentage differences between the UI figures including the noneconomic code change(s) and the UI levels not including the noneconomic code change(s) expanded by a constant amount each month during the wedging period. Using this method, the UI levels not including the noneconomic code change(s) for the months in the wedging period are multiplied by adjustment factors to obtain figures adjusted to the new benchmark level. The factor for the previous benchmark month is 1.00000. For a nine-month wedge, the factor for the December following the previous benchmark month is the ratio between the UI figure including the noneconomic code change(s) and the UI level not including the noneconomic code change(s). For a twelve-month wedge, the factor for the new benchmark month is the ratio between the UI figure including the noneconomic code change(s) and the UI level not including the noneconomic code change(s). Determine the adjustment factors for the months in the wedging period by increasing (or decreasing) the adjustment factor by a constant amount each month so that the factor for the final month is equal to the ratio between the UI figure including the code change(s) and the UI level not including the code change(s) for the December following the previous benchmark month for a nine-month wedge or for the new benchmark month for a twelve-month wedge.

The procedures for determining the adjustment factors are expressed in the following formulas and examples, first for a nine-month wedge and then for a twelve-month wedge.

Nine-Month Wedge Procedure

Formula 1: $d = (U_i - U)/nU$

where: d = the constant monthly change in the adjustment factor

U_i = the UI figure including the noneconomic code change(s)
for the December following the previous benchmark
month

U = the UI level not including the noneconomic code
change(s) for the December following the previous
benchmark month

n = the number of months in the wedging period

ExampleGiven: $U_i = 4,753$ $U = 4,511$ $n = 9$

$$d = (U_i - U)/nU$$

$$d = (4,753 - 4,511)/(9)(4,511)$$

$$d = 242/40,599$$

$$d = .00596$$

Formula 2: $A = 1 + dN$ where: A = the adjustment factor for a particular month d = the constant monthly change in the adjustment factor
(see Formula 1) N = the numerical order of a particular month in the
wedging periodExampleGiven: $d = .00596$ $N = , 0,1,2,3,....,9$

$$A = 1 + dN$$

$$A = 1 + (.00596)(0) = 1.00000$$

$$1 + (.00596)(1) = 1.00596$$

$$1 + (.00596)(2) = 1.01192$$

$$1 + (.00596)(3) = 1.01788$$

$$1 + (.00596)(4) = 1.02384$$

$$A = 1 + (.00596)(5) = 1.02980$$

$$1 + (.00596)(6) = 1.03576$$

$$1 + (.00596)(7) = 1.04172$$

$$1 + (.00596)(8) = 1.04768$$

$$1 + (.00596)(9) = 1.05364$$

Figure 11.1 illustrates the percentage wedge procedure for revising the UI levels not including the noneconomic code change(s) to the new benchmark levels using a nine-month wedge.

Figure 11.1

Using a Nine-Month Percentage Wedge to Revise the UI Levels
Not Including Noneconomic Code Change(s) to New Benchmark Levels

Month and year	UI levels not including code change(s) (unrounded)	Previous & current benchmarks (see note)	UI data including code change(s)	Numerical order in wedging period, N	Adjust- ment factor, $A=1+Nd$ (see note)	Revised AE figures based on new bench- mark level (see note)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
03-84	4,151	4,151	-	0	1.00000	4,151
04-84	4,108	-	-	1	1.00596	4,132
05-84	4,147	-	-	2	1.01192	4,196
06-84	4,200	-	-	3	1.01788	4,275
07-84	4,263	-	-	4	1.02384	4,365
08-84	4,298	-	-	5	1.02980	4,426
09-84	4,253	-	-	6	1.03576	4,405
10-84	4,340	-	-	7	1.04172	4,521
11-84	4,455	-	-	8	1.04768	4,667
12-84	4,511	-	4,753	9	1.05364	4,753
01-85	-	-	4,790	-	-	4,790
02-85	-	-	4,810	-	-	4,810
03-85	-	4,852	4,852	-	-	4,852

Note: (1) In this example, the previous benchmark month is March 1984 and the new benchmark month is March 1985. (2) The example for Formula 1 gave us $d = .00596$ which was then used in Formula 2 (see Col. 6). (3) Col. 7 = Col. 2 times Col. 6.

Twelve-Month Wedge Procedure

Formula 1: $d = (U_i - U)/nU$

where: d = the constant monthly change in the adjustment factor

U_i = the UI figure including the noneconomic code change(s)
for the new benchmark month

U = the UI level not including the noneconomic code
change(s) for the new benchmark month

n = the number of months in the wedging period

Example

Given: $U_1 = 4,852$ $U = 4,604$ $n = 12$

$$d = (U_1 - U)/nU$$

$$d = (4,852 - 4,604)/(12)(4,604)$$

$$d = 248/55,248$$

$$d = .00449$$

Formula 2: $A = 1 + dN$

where: A = the adjustment factor for a particular month

d = the constant monthly change in the adjustment factor
(see Formula 1)

N = the numerical order of a particular month in the
wedging period

Example

Given: $d = .00449$ $N = 0,1,2,3,\dots,12$

$$A = 1 + dN$$

$A = 1 + (.00449)(0) = 1.00000$	$A = 1 + (.00449)(7) = 1.03143$
$1 + (.00449)(1) = 1.00449$	$1 + (.00449)(8) = 1.03592$
$1 + (.00449)(2) = 1.00898$	$1 + (.00449)(9) = 1.04041$
$1 + (.00449)(3) = 1.01347$	$1 + (.00449)(10) = 1.04490$
$1 + (.00449)(4) = 1.01796$	$1 + (.00449)(11) = 1.04939$
$1 + (.00449)(5) = 1.02245$	$1 + (.00449)(12) = 1.05388$
$1 + (.00449)(6) = 1.02694$	

Figure 11.2 illustrates the percentage wedge procedure for revising the UI levels not including the noneconomic code change(s) to the new benchmark levels using a twelve-month wedge.

Figure 11.2

Using a Twelve-Month Percentage Wedge to Revise the UI Levels Not Including Noneconomic Code Change(s) to New Benchmark Levels

Month and year	UI levels not including code change(s) (unrounded) (see note)	Previous & current benchmarks (see note)	UI data including code change(s)	Numerical order in wedging period, N	Adjustment factor, $A=1+Nd$ (see note)	Revised AE figures based on new benchmark level (see note)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
03-84	4,151	4,151	-	0	1.00000	4,151
04-84	4,108	-	-	1	1.00449	4,126
05-84	4,147	-	-	2	1.00898	4,184
06-84	4,200	-	-	3	1.01347	4,257
07-84	4,263	-	-	4	1.01796	4,340
08-84	4,298	-	-	5	1.02245	4,394
09-84	4,253	-	-	6	1.02694	4,368
10-84	4,340	-	-	7	1.03143	4,476
11-84	4,455	-	-	8	1.03592	4,615
12-84	4,511	-	4,753	9	1.04041	4,693
01-85	4,546	-	4,790	10	1.04490	4,750
02-85	4,565	-	4,810	11	1.04939	4,790
03-85	4,604	4,852	4,852	12	1.05388	4,852

Note: (1) In this example, the previous benchmark month is March 1984 and the new benchmark month is March 1985. (2) The example for Formula 1 gave us $d = .00449$ which was then used in Formula 2 (see Col. 6). (3) Col. 7 = Col. 2 times Col. 6. (4) The 1985 data in Col. 2 were derived by: (a) dividing the December 1984 figure in Col. 2 by the December 1984 figure in Col. 4 ($4,511/4,753$) and (b) multiplying the result, .9491, times the 1985 data in Col. 4.

2. Wedging a Series of Updated CES Estimates

This method assumes that the percentage differences between the updated CES estimates and the "true" level indicated by the new benchmark have expanded by a constant amount each month during the interbenchmark period. Using this method, multiply the updated estimates for the interbenchmark months by adjustment factors to obtain figures adjusted to the new benchmark level. The factor for the previous benchmark month (March) is 1.00000; the factor for the new benchmark month is the ratio between the new benchmark and the updated estimate for the new benchmark month. Determine the adjustment factors for the months in the interbenchmark period by increasing or decreasing the adjustment factor by a constant amount each month, so that the factor for the final month is equal to the ratio between the new benchmark and the updated estimate for the new benchmark month.

The procedure for determining the adjustment factors is expressed in the following formulas:

Formula 1: $d = (B - E)/nE$

where: d = the constant monthly change in the adjustment factor
 B = the new benchmark
 E = the updated estimate for the new benchmark month
(March)
 n = the number of months in the wedging period

Example

Given: $B = 5,000$ $E = 4,760$ $n = 12$

$$\begin{aligned}d &= (B - E)/nE \\d &= (5,000 - 4,760)/(12)(4,760) \\d &= 240/57,120 \\d &= .00420\end{aligned}$$

Formula 2: $A = 1 + dN$

where: A = the adjustment factor for a particular month
 d = the constant monthly change in the adjustment factor
(d is derived in Formula 1)
 N = the numerical order of a particular month in the wedging period

Example

Given: $d = .00420$ $N = 0, 1, 2, 3, \dots, 12$

$$A = 1 + dN$$

$$\begin{aligned} A = & 1 + (.00420) (0) = 1.00000 \\ & 1 + (.00420) (1) = 1.00420 \\ & 1 + (.00420) (2) = 1.00840 \\ & 1 + (.00420) (3) = 1.01260 \\ & 1 + (.00420) (4) = 1.01680 \\ & 1 + (.00420) (5) = 1.02100 \\ & 1 + (.00420) (6) = 1.02520 \\ & 1 + (.00420) (7) = 1.02940 \\ & 1 + (.00420) (8) = 1.03360 \\ & 1 + (.00420) (9) = 1.03780 \\ & 1 + (.00420) (10) = 1.04200 \\ & 1 + (.00420) (11) = 1.04620 \\ & 1 + (.00420) (12) = 1.05040 \end{aligned}$$

Figure 11.3 illustrates the percentage wedge procedure for revising updated CES all employee estimates to new benchmark levels.

Figure 11.3

Using a Percentage Wedge to Revise Updated CES All
Employee Estimates to New Benchmark Levels

Month and year	Updated AE est. based on previous benchmark (unrounded)	Prev. & new bench- marks (see note)	Numerical order in wedging period, N	Adjust- ment factor, $A=1+Nd$ (see note)	Revised AE figs. based on the new benchmark level (see note)
(1)	(2)	(3)	(4)	(5)	(6)
03-84	4,151	4,151	0	1.00000	4,151
04-84	4,108	-	1	1.00420	4,125
05-84	4,147	-	2	1.00840	4,182
06-84	4,200	-	3	1.01260	4,253
07-84	4,263	-	4	1.01680	4,335
08-84	4,298	-	5	1.02100	4,388
09-84	4,253	-	6	1.02520	4,360
10-84	4,340	-	7	1.02940	4,468
11-84	4,455	-	8	1.03360	4,605
12-84	4,511	-	9	1.03780	4,682
01-85	4,623	-	10	1.04200	4,817
02-85	4,666	-	11	1.04620	4,882
03-85	4,760	5,000	12	1.05040	5,000

Note: In this example, the previous benchmark month is March 1984 and the new benchmark month is March 1985. The example for Formula 1 gave us $d = .00420$ which was then used in Formula 2 (see Col. 5); Col. 6 = Col. 2 times Col. 5.

C. Using an Arithmetic Wedge

1. Wedging a Replacement Series

This method assumes that the differences between the UI figures including the noneconomic code change(s) and the UI levels not including the noneconomic code change(s) expanded by a constant amount each month during the wedging period. Using this method, adjust the UI levels not including the noneconomic code change(s) for the months in the wedging period by adding (or subtracting) an adjustment increasingly larger each month by a constant amount. The adjustment for the previous benchmark month is zero. For a nine-month wedge, the adjustment for the December following the previous benchmark month is the difference between the UI figure including the noneconomic code change(s) and the UI level not including the noneconomic code change(s). For a twelve-month wedge, the adjustment for the new benchmark month is the difference between the UI figure including the noneconomic code change(s) and the UI level not including the noneconomic code change(s). Determine the adjustments for the months in the wedging period by increasing (or decreasing) the adjustment by a constant amount each month so that the adjustment for the final month is equal to the difference between the UI figure including the code change(s) and the UI level not including the code change(s) for the December following the previous benchmark month for a nine-month wedge or for the new benchmark month for a twelve-month wedge.

The procedures for determining the adjustments are expressed in the following formulas and examples, first for a nine-month wedge and then for a twelve-month wedge.

Nine-Month Wedge

Formula 1: $d = (U_i - U)/n$

where: d = the constant amount that the adjustment is changed each month

U_i = the UI figure including the noneconomic code change(s) for the December following the previous benchmark month

U = the UI level not including the noneconomic code change(s) for the December following the previous benchmark month

n = the number of months in the wedging period

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ExampleGiven: $U_1 = 4,753$ $U = 4,511$ $n = 9$

$$d = (U_1 - U)/n$$

$$d = (4,753 - 4,511)/9$$

$$d = 242/9$$

$$d = 26.9$$

Formula 2: $A = dN$ where: A = the adjustment for a particular month d = the constant amount that the adjustment is changed
each month (see Formula 1) N = the numerical order of a particular month in the
wedging periodExampleGiven: $d = 26.9$ $N = 0, 1, 2, 3, \dots, 9$

$$A = dN$$

$$A = (26.9)(0) = 0$$

$$(26.9)(1) = 27$$

$$(26.9)(2) = 54$$

$$(26.9)(3) = 81$$

$$(26.9)(4) = 108$$

$$A = (26.9)(5) = 135$$

$$(26.9)(6) = 161$$

$$(26.9)(7) = 188$$

$$(26.9)(8) = 215$$

$$(26.9)(9) = 242$$

Figure 11.4 illustrates the arithmetic wedge procedure for revising the UI levels not including the noneconomic code change(s) to new benchmark levels using a nine-month wedge.

Figure 11.4

Using a Nine-Month Arithmetic Wedge to Revise the UI Levels Not Including
Noneconomic Code Change(s) to New Benchmark Levels

Month and year	UI levels not including code change(s) (unrounded)	Previous & current bench- marks (see note)	UI data including code change(s)	Numerical order in wedging period, N	Adjust- ment, A=dN (see note)	Rev. AE figs. based on the new benchmark level (see note)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
03-84	4,151	4,151	-	0	0	4,151
04-84	4,108	-	-	1	27	4,135
05-84	4,147	-	-	2	54	4,201
06-84	4,200	-	-	3	81	4,281
07-84	4,263	-	-	4	108	4,371
08-84	4,298	-	-	5	135	4,433
09-84	4,253	-	-	6	161	4,414
10-84	4,340	-	-	7	188	4,528
11-84	4,455	-	-	8	215	4,670
12-84	4,511	-	4,753	9	242	4,753
01-85	-	-	4,790	-	-	4,790
02-85	-	-	4,810	-	-	4,810
03-85	-	4,852	4,852	-	-	4,852

Note: (1) In this example, the previous benchmark month is March 1984 and the new benchmark month is March 1985. (2) The example for Formula 1 gave us $d = 26.9$ which was then used in Formula 2 (see Col. 6). (3) Col. 7 = Col. 2 plus Col. 6.

Twelve-Month Wedge Procedure

Formula 1: $d = (U_i - U)/n$

where: d = the constant amount that the adjustment is changed each month

U_i = the UI figure including the noneconomic code change(s) for the new benchmark month

U = the UI level not including the noneconomic code changes(s) for the new benchmark month

n = the number of months in the wedging period

Example

Given: $U_1 = 4,852$ $U = 4,604$ $n = 12$

$$d = (U_1 - U)/n$$

$$d = (4,852 - 4,604)/12$$

$$d = 248/12$$

$$d = 20.7$$

Formula 2: $A = dN$

where: A = the adjustment for a particular month

d = the constant amount that the adjustment is changed
each month (see Formula 1)

N = the numerical order of a particular month in the
wedging period

Example

Given: $d = 20.7$ $N = 0,1,2,3,\dots,12$

$$A = dN$$

$$A = (20.7)(0) = 0$$

$$(20.7)(1) = 21$$

$$(20.7)(2) = 41$$

$$(20.7)(3) = 62$$

$$(20.7)(4) = 83$$

$$(20.7)(5) = 104$$

$$(20.7)(6) = 124$$

$$A = (20.7)(7) = 145$$

$$(20.7)(8) = 166$$

$$(20.7)(9) = 186$$

$$(20.7)(10) = 207$$

$$(20.7)(11) = 228$$

$$(20.7)(12) = 248$$

Figure 11.5 illustrates the arithmetic wedge procedure for revising the UI levels not including the noneconomic code change(s) to new benchmark levels using a twelve-month wedge.

Figure 11.5

Using a Twelve-Month Arithmetic Wedge to Revise the UI Levels Not Including Noneconomic Code Change(s) to New Benchmark Levels

Month and year	UI levels not incl. change(s) (unrounded) (see note)	Previous & current bench- marks (see note)	UI data including code change(s)	Numerical order in wedging period, N	Adjust- ment, A=dN (see note)	Rev. AE figs. based on the new benchmark level (see note)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
03-84	4,151	4,151	-	0	0	4,151
04-84	4,108	-	-	1	21	4,129
05-84	4,147	-	-	2	41	4,188
06-84	4,200	-	-	3	62	4,262
07-84	4,263	-	-	4	83	4,346
08-84	4,298	-	-	5	104	4,402
09-84	4,253	-	-	6	124	4,377
10-84	4,340	-	-	7	145	4,485
11-84	4,455	-	-	8	166	4,621
12-84	4,511	-	4,753	9	186	4,697
01-85	4,546	-	4,790	10	207	4,753
02-85	4,565	-	4,810	11	228	4,793
03-85	4,604	4,852	4,852	12	248	4,852

Note: (1) In this example, the previous benchmark month is March 1984 and the new benchmark month is March 1985. (2) The example for Formula 1 gave us $d = 20.7$ which was then used in Formula 2 (see Col. 6). (3) Col. 7 = Col. 2 plus Col. 6. (4) The 1985 data in Col. 2 were derived by: (a) dividing the December 1984 figure in Col. 2 by the December 1984 figure in Col. 4 ($4,511/4,753$) and (b) multiplying the result, .9491, times the 1985 data in Col. 4.

2. Wedging a Series of Updated CES Estimates

This method assumes that the differences between the updated CES estimates and the "true" level indicated by the new benchmark have expanded by a constant amount each month during the interbenchmark period. Using this method, adjust the updated estimates for the interbenchmark months by adding (or subtracting) an adjustment that is increasingly larger each month by a constant amount. The adjustment for the previous benchmark month is zero, while the adjustment for the new benchmark month is the difference between the new benchmark and the updated estimate for the new benchmark month. Determine the adjustments for the months in the interbenchmark period by increasing (or decreasing) the adjustment by a constant amount each month, so that the adjustment for the final month is equal to the difference between the new benchmark and the updated estimate for the new benchmark month.

The procedure for determining the adjustments is expressed in the following formulas:

Formula 1: $d = (B - E)/n$

where: d = the constant amount that the adjustment is changed each month

B = the new benchmark

E = the updated estimate for the new benchmark month (March)

n = the number of months in the wedging period

Example

Given: $B = 5,000$ $E = 4,760$ $n = 12$

$d = (B - E)/n$

$d = (5,000 - 4,760)/12$

$d = 240/12$

$d = 20$

Formula 2: $A = dN$

where: A = the adjustment for a particular month
 d = the constant amount that the adjustment is changed
each month (d is derived in Formula 1)
 N = the numerical order of a particular month in the
wedging period

Example

Given: $d = 20$ $N = 0, 1, 2, 3, \dots, 12$

$$A = dN$$

$A = (20)(0) = 0$	$A = (20)(7) = 140$
$(20)(1) = 20$	$(20)(8) = 160$
$(20)(2) = 40$	$(20)(9) = 180$
$(20)(3) = 60$	$(20)(10) = 200$
$(20)(4) = 80$	$(20)(11) = 220$
$(20)(5) = 100$	$(20)(12) = 240$
$(20)(6) = 120$	

Figure 11.6 illustrates the arithmetic wedge procedure for revising updated CES all employee estimates to new benchmark levels.

Figure 11.6

Using an Arithmetic Wedge to Revise Updated CES All
Employee Estimates to New Benchmark Levels

Month and year	Updated AE est. based on previous benchmark (unrounded)	Previous and new bench- marks (see note)	Numerical order in wedging period, N	Adjust- ment, A=dN (see note)	Rev. AE figs. based on the new benchmark level (see note)
(1)	(2)	(3)	(4)	(5)	(6)
03-84	4,151	4,151	0	0	4,151
04-84	4,108	-	1	20	4,128
05-84	4,147	-	2	40	4,187
06-84	4,200	-	3	60	4,260
07-84	4,263	-	4	80	4,343
08-84	4,298	-	5	100	4,398
09-84	4,253	-	6	120	4,373
10-84	4,340	-	7	140	4,480
11-84	4,455	-	8	160	4,615
12-84	4,511	-	9	180	4,691
01-85	4,623	-	10	200	4,823
02-85	4,666	-	11	220	4,886
03-85	4,760	5,000	12	240	5,000

Note: In this example, the previous benchmark month is March 1984 and the new benchmark month is March 1985. The example for Formula 1 gave us $d = 20$ which was then used in Formula 2 (see Col. 5); Col. 6 = Col. 2 plus Col. 5.

11.3.3 Projecting in the Postbenchmark Period

Since the conversion to new benchmark levels normally occurs at least nine months after the new benchmark month, it is necessary to revise the all employee estimates for this postbenchmark period. Add the useable all employee data from significant late reports received after the final monthly closings to the matched sample totals and compute updated link relatives. Then use these updated link relatives to project forward from the new benchmark figures for March to obtain all employee estimates for each month in the postbenchmark period.

If a State has the ES-202 Report for the second quarter at benchmark revision time, it may use macrodata from it (adjusted as necessary) to replace the CES estimates for April, May, and June. However, the series are still considered to have March benchmarks, rather than June, and the data for April, May, and June are still subject to change at the benchmark revision in the following year.

11.3.4 Revising Previously Benchmarked Data

Do not revise data from the beginning of a series through the previous benchmark month by either wedging or replacement when revising CES all employee estimates for basic cells to new benchmark levels. Exceptions are allowed in the case of large noneconomic industry or ownership code changes or substantial reporting errors (e.g., double-counting, excluding a group of covered workers, etc.).

When wedging because of large noneconomic code changes, the total amount to be wedged must exceed 6 percent of the CES all employee estimate for the new benchmark month before it is permissible to wedge back further than the April following the previous benchmark month (March).

When substantial reporting errors have been discovered, there are two options available. If the month of origin is known, replace the erroneous data; if the month of origin is not known, use a wedging procedure. In either case, do not revise data for the previous benchmark month and the months preceding it unless the CES data differ from the UI data by more than 2 percent or the CES data differ from the UI data by 1,000 or more employees.

It is permissible to revise the previous benchmark month and the months preceding it in the case of periodic changes to the SIC coding structure, or periodic changes to the definitions of the metropolitan statistical areas.

11.4 REVISING ESTIMATES DEPENDENT ON THE ALL EMPLOYEE DATA REVISED TO NEW BENCHMARK LEVELS

11.4.1 Revising Women Worker and Production Worker Estimates

After the all employee estimates have been revised to new benchmark levels, the women worker and production worker estimates are examined and may be revised for cells where the all employee estimates were changed. In addition, revise the women worker and production worker series even though the all employee series are not, if the ratios of women workers and production workers to all employees have been updated because of significant new information received after the final monthly closings were completed (see Sec. 11.2.1).

Multiply the updated estimated ratios of women workers and production workers to all employees (WW/AE, PW/AE) times the all employee (AE) series revised to new benchmark levels to obtain revised series of women workers and production workers. Update these ratios to reflect not only the original sample data, but also to reflect significant useable data received after the final monthly closings were completed.

If a State maintains women worker series on a basis other than monthly, multiply the estimated ratios of women workers to all employees (WW/AE) times the all employee estimates revised to new benchmark levels for the pertinent months. When updated sample data are available, use the revised ratios.

11.4.2 Revising Hours and Earnings Estimates

Cells in which production worker estimates have been revised at benchmark time will also need to have the following types of estimates recomputed using the revised production worker estimates: total worker-hours (WH), total payroll (PR), and overtime worker-hours (OTWH). (See Sec. 9.4.3.)

These recomputations will not affect average weekly earnings (AWE), average hourly earnings (AHE), average weekly hours (AWH), or average weekly overtime hours (AWOH) for basic cells. However, these types of estimates may be affected in summary cells since revising production worker estimates causes reweighting.

Recompute total worker-hours (WH), total payroll (PR), and overtime worker-hours (OTWH) for a basic cell beginning with the first revised production worker estimate and continuing through all of the subsequent months. Then adjust the summary cell estimates for these data types to reflect the changes in their component cells. Then compute revised estimates for average weekly hours (AWH), average hourly earnings (AHE), average weekly earnings (AWE), and average weekly overtime hours (AWOH).

It may be necessary to recompute hours and earnings data for a basic cell even though production worker estimates did not change, if reports with significant useable hours and earnings microdata have been received since the final monthly closings were completed. Include all such data in the recomputations of hours and earnings estimates in the postbenchmark period; such data that would significantly affect hours and earnings estimates in the interbenchmark period are also to be used.

11.5 EVALUATING NONSAMPLE-BASED ESTIMATES

The appropriate time to evaluate nonsample-based estimates is during the annual benchmark review. Compare estimates based on trends or constants to the UI macrodata levels to determine if new levels or trends are needed. Compare nonsample-based estimates to sample-based estimates, if available, to determine which method produces better estimates. Every effort is to be made to obtain additional sample reporters, so that the number of cells requiring the use of nonsample techniques can be minimized. It may be necessary to collapse cells to levels that can be carried forward by a sample and produce valid estimates.

11.6 HANDLING PERMANENT BREAKS IN CES SERIES

The decision to break a series is made at benchmark revision time. Review series which have experienced a permanent break exceeding 3 percent during the year. Break the series, if the remaining sample in those series is not reflective of their universe characteristics. (See Secs. 8.2.2.D and 9.2.3.E.)

**EXHIBIT 11-A: USING THE D-LINK TECHNIQUE TO REVIEW
ALL EMPLOYEE BENCHMARK REVISIONS**

The D-Link technique is an efficient method for reviewing revisions to CES all employee estimates and for assessing the reliability of the various estimating methods.

The CES estimating methods for basic cells (sample link relative, trend, composite link, constant, etc.) are designed to measure over-the-month change. Estimate levels are set by the benchmarks.

The D-link technique generates a set of statistics that measure the degree to which the link relative between any two consecutive months computed at a final monthly closing approximates the corresponding link relative between the same months based on the revised estimates.

The basic statistic generated by this technique is called a D-link. It is computed as follows:

$$D = (R_c/R_p) - (E_c/E_p)$$

where: D = the D link, the difference between the links
R = a revised estimate
E = an estimate computed at a final monthly closing
c = current month
p = previous month

The following statistics may then be derived:

(1) Sum of D-links: $\sum D = D_1 + D_2 + \dots + D_n$

(2) Average (Arithmetic Mean) of D-links: $\bar{D} = \sum D/N$

(3) Standard Deviation: $S = \sqrt{[\sum (D - \bar{D})^2]/N}$

where: N = the number of D-links

The D-link technique may be used to analyze data in the following ways:

1. Examining revised data for annual or quarterly breaks or for any other aberration, such as the failure to reflect a strike, a large arithmetic error, a large typographical error, etc.

Any period may be examined. The analyst looks for isolated cases of unusually large absolute values of D. Such large values probably indicate an error in either the revised data or the final closing estimates. The analyst also re-examines the revised data for the pairs of months.

2. Examining data for sample-based basic cells during the interbenchmark period.

The analyst can utilize a number of useful measures:

- A. The sum of D-links, ΣD , measures the cumulative error in the estimate for a cell over the period analyzed.
 - B. The standard deviation, S, is an efficient measure of sample adequacy. The smaller S is, the better the sample is. Ranges of acceptability have been developed based on the review of many series. Generally, if S is .025 or less, the series may be considered acceptable. Small series (1,000 or fewer employees) may be considered acceptable with with standard deviations as high as .040.
 - C. In basic cells with acceptably small standard deviations, the mean of D-links, $\bar{D}$, is a reliable measure of bias and may be used to obtain bias adjustment factors. If $\bar{D}$ can be accepted as a measure of bias for the period analyzed, then the new bias adjustment factor will be equal to the product of the previous bias adjustment factor and $(1.0000 + \bar{D})$. The previous bias adjustment factor is either the one used when computing the monthly final closing estimates or 1.0000, if a bias adjustment factor was not used previously. If the standard deviation, S, is too large, then $\bar{D}$ will probably not be useful as a measure of bias. In this case, the sample needs to be expanded so that in the future S will become smaller and bias adjustment may be introduced.
3. Examining data in the postbenchmark period.

In general, revised data in the postbenchmark period retain final monthly closing trends, reflect the new bias adjustment factors, and are adjusted to new benchmark levels. The D-links for data in this period will normally only differ from zero because of rounding error or differences in bias adjustment factors. A D-link of greater magnitude indicates a possible error and the need to re-examine the period involved.

4. Examining basic cells in which estimating methods other than simple sample-based link relatives were used.

- A. Evaluating the use of atypical procedures.

Create a series of estimates using simple sample-based link relatives with no atypical adjustments. Compare this series to either the final monthly closing estimates which include atypical adjustments or to the revised data by using the D-link procedure to determine which is the most effective estimating method. In general, the method which produces the smallest standard deviation, S , is best, regardless of the values of D , since D may be adjusted towards zero by using bias adjustment factors.

- B. Evaluating estimating methods other than sample-based link relatives.

Create a series of estimates using sample link relatives (with or without atypical adjustments) and compared with a trended or constant series as described in 11.A. above. The same tests apply.

5. Other uses.

The D-link technique may be used to analyze a time series computed using different estimating methods and covering the same time period. This analysis is done in order to produce a quantitative measure of the trend differences in the different sets of estimates.

D-link analysis is simple in concept and easy to perform. It is based on two simple statistical concepts -- the arithmetic mean and the standard deviation. Using a programmable calculator, data input time is only 5 to 10 minutes per cell for a typical 13 month period. The D-link procedures can be programmed for use on a computer to take advantage of data already stored in a data base thus saving more time.

Figure 11.7 shows an example of D-link computations and analysis for a typical set of estimates.

Figure 11.7

An Example of D-Link Computations and Analysis

This example is for an employment series in a large State. The time covered is the interbenchmark period. The original estimates, i.e., estimates computed for the final monthly closings, were made using a large matched sample. The link relatives were obtained as a part of this process. No atypical adjustments were necessary. The revised estimates were obtained using UI employment data adjusted for errors and differences in industry coding. The original and revised estimates and the resulting D-links are shown below.

<u>Original Estimates (E)</u>		<u>Revised Estimates (R)</u>		<u>D-Links (D)</u>	
M	53,760	M	53,760		
A	53,256	A	53,406	M-A	.0028
M	53,499	M	53,865	A-M	.0040
J	52,706	J	53,472	M-J	.0075
J	52,234	J	53,256	J-J	.0049
A	52,461	A	53,733	J-A	.0046
S	52,452	S	53,672	A-S	-.0010
O	51,956	O	53,430	S-O	.0049
N	52,098	N	53,509	O-N	-.0013
D	52,442	D	53,925	N-D	.0012
J	52,465	J	53,918	D-J	-.0006
F	52,428	F	54,686	J-F	.0149
M	52,286	M	54,556	F-M	.0003

Compute D-links using the formula, $D = (R_c/R_p) - (E_c/E_p)$, discussed earlier in Exhibit 11-A. Computations for two D-links are shown below.

Dec.-Jan. D-Link

$$D = (R_c/R_p) - (E_c/R_p)$$

$$D = (53,918/53,925) - (52,465/52,442) = .999870 - 1.000439$$

$$D = -.000569 = \underline{-.0006}$$

Jan.-Feb. D-Link

$$D = (R_c/R_p) - (E_c/R_p)$$

$$D = (54,686/53,918) - (52,428/52,465) = 1.014244 - .999295$$

$$D = .014949 = \underline{.0149}$$

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Look for large D-links, i.e., large absolute values of D. The most obvious large D-link here is .0149 for Jan.-Feb. The original estimates decreased by 37 from 52,465 to 52,428 between January and February, while the revised estimates increased by 768 from 53,918 to 54,686 during the same interval. Carefully review the original and revised estimates so that this discrepancy can be properly resolved.

Determine the sum of the D-links for the period shown using the formula, $\Sigma D = D_1 + D_2 + \dots + D_n$, taking the signs of the D-links into account. The $\Sigma D = .0422$ in this example. This represents the cumulative error during the interbenchmark period.

Divide the sum of the D-links by the number of D-links to obtain the average (arithmetic mean) of the D-links using the formula, $\bar{D} = \Sigma D/N$. $\bar{D} = .0422/12 = .003517 = .0035$ in this example. This represents the average monthly error over the interbenchmark period.

$\bar{D}$ is a reliable measure of bias in basic cells which have acceptably small standard deviations, and may be used to derive bias adjustment factors for such cells. The new bias adjustment factor equals the old factor multiplied by $(1.0000 + \bar{D})$.

Compute the standard deviation, S, which may be used as a guide to sample adequacy. The smaller the standard deviation is, the better the sample is. If S is .0250 or less, the sample is probably adequate. The formula used to derive the standard deviation and the computations for this example are shown below.

$$S = \sqrt{[\Sigma(D - \bar{D})^2]/N}$$

<u>D</u>	<u>$\bar{D}$</u>	<u>$(D - \bar{D})$</u>	<u>$(D - \bar{D})^2$</u>
.0028	.0035	-.0007	.00000049
.0040	.0035	.0005	.00000025
.0075	.0035	.0040	.00001600
.0049	.0035	.0014	.00000196
.0046	.0035	.0011	.00000121
-.0010	.0035	-.0045	.00002025
.0049	.0035	.0014	.00000196
-.0013	.0035	-.0048	.00002304
.0012	.0035	-.0023	.00000529
-.0006	.0035	-.0041	.00001681
.0149	.0035	.0114	.00012996
.0003	.0035	-.0032	.00001024

$$\Sigma(D - \bar{D}) = .00022746$$

$$[\Sigma(D - \bar{D})^2]/N = .00022746/12 = .00001896$$

$$\sqrt{[\Sigma(D - \bar{D})^2]/N} = \sqrt{.00001896} = .00435431$$

$$S = .0044$$

The standard deviation in this example is .0044; since this is less than .0250, it indicates that the industry has an adequate sample.

Compute a range of two standard deviations in each direction around the average of the D-links ($\bar{D}$). Figures falling outside of this range are suspect and should be investigated further.

$$\bar{D} - 2S = .0035 - .0088 = -.0053$$

$$\bar{D} + 2S = .0035 + .0088 = +.0123$$

Thus the range extends from -.0053 to +.0123. The only D-link to fall outside of this range was the one for Jan.-Feb. of .0149. This confirms the earlier conclusion regarding the Jan.-Feb. data.

$\bar{D}$ and S may be recomputed excluding the D-link for Jan.-Feb. in order to obtain more realistic figures, particularly for the bias adjustment factor.

$$\Sigma D = .0422 - .0149 = .0273$$

$$\bar{D} = \Sigma D / N = .0273 / 11 = .0025$$

This new $\bar{D}$ figure is probably a better figure than the earlier one to use in computing the bias adjustment factor.

The revised standard deviation, excluding the Jan.-Feb. D-link, is obtained as follows.

$$\Sigma (D - \bar{D})^2 = .00022746 - .00012996 = .00009750$$

$$[\Sigma (D - \bar{D})^2] / N = .00009750 / 11 = .00000886$$

$$S = \sqrt{[\Sigma (D - \bar{D})^2] / N} = \sqrt{.00000886} = .00297658 = \underline{.0030}$$

The revised range would be:

$$\bar{D} - 2S = .0025 - .0060 = -.0035$$

$$\bar{D} + 2S = .0025 + .0060 = +.0085$$

Section 12: PUBLICATION AND CONFIDENTIALITY

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Section 12: PUBLICATION AND CONFIDENTIALITY**12.1 GENERAL GUIDELINES**

The guidelines for the publication of employment, hours, and earnings data in the CES survey are based on the needs of users of the data, the requirements to protect the confidentiality of employer responses, and the requirements imposed by good statistical practice. The Office of Management and Budget (OMB) requires that data collected with federal funds for the express purpose of producing statistical compilations of general public interest be published in some manner. Formal and periodic publications that are expensive to develop, produce, and disseminate should be focused on providing data of record to serve major and recurring uses and users. Detailed data subject to infrequent or nonrecurring uses should be provided either through special purpose tabulations or through the development of public use data files.

12.2 DATA USES

The data generated by the CES survey are used by diverse groups for diverse purposes. Data are used for purposes of economic intelligence and analysis, research, and evaluation at the local, State, and national levels. Data also are used as input into the development of other data series or economic indicators at these geographic levels. The major user groups include local, State, and federal government agencies, businesses, labor organizations, trade associations, academicians, and research and economic forecasting organizations.

Businesses use the employment data to evaluate local labor supply as a factor in plant location decisions. Companies also use local employment data to help forecast market demand for their products.

Trade unions and businesses use earnings data to negotiate wage settlements in the collective bargaining process. Trade unions and government have recently used industry employment data to monitor the adverse effects of imports on employment in certain industries. Earnings data are required as an escalation factor in many union contracts. Many businesses include escalation clauses in their long-term contracts, indexing the labor portion of the contract to the average hourly earnings (AHE) in their particular industry.

In recent years, a great demand has developed for data on the employment of women. Numerous organizations are analyzing the impact of the changing role of women in the labor force. For this reason, States are urged to publish women worker estimates.

These uses of CES data do not represent an exhaustive list, but they do show that employment, hours, and earnings data, indirectly or directly, affect a great number of economic decisions. For this reason it is necessary to make accurate and prompt estimates available to the public.

12.3 PRESS RELEASE GUIDELINES

The release of State and area employment, hours, and earnings data is the responsibility of the contract State agencies (State Employment Security Agencies or State Labor Departments). The State agencies determine whether these data are released as part of an existing State publication or in a separate publication. The BLS regional offices and BLS-Washington also publish selected State and area series. No State or area data are published by BLS that have not previously been released to the public by the State, and BLS does not publish any data that have not been validated by the BLS regional offices. CES data published by the States require BLS regional office validation, and any publication with CES data must cite BLS as a partner in this cooperative program.

12.3.1 Monthly Releases

Most State agencies produce a monthly publication containing labor force data and related labor market information for the State and for areas within the State (either a Metropolitan Statistical Area (MSA), a labor market area, or a group of MSAs). Many of the data in these monthly publications are derived from the Federal/State cooperative programs between the Bureau of Labor Statistics and State Employment Security Agencies. BLS-Washington publishes Statewide employment estimates for selected industries each month in the news release State and Metropolitan Area Employment and Unemployment. Detailed annual data are published in Employment, Hours, and Earnings, States and Areas and its supplements. Selected industry data are published annually in the Handbook of Labor Statistics. BLS-Washington publishes selected monthly industry data for States and areas in Employment and Earnings and in the Monthly Labor Review. The Statistical Abstract of the United States, published by the Department of Commerce, contains total nonagricultural employment annual averages by State.

12.3.2 Timing of Releases Prepared by the States

Preliminary estimates are to be issued as soon as possible, while assuring a reasonable degree of accuracy, but in no case later than six (6) weeks following the reference week. Also to be included are the revised (or final) data for the previous month. In addition, the monthly press release is to contain the current month a-year-ago figure. For example, if a State set the fourth Friday following the survey week as its press release date, then its August 1985 press release would occur on August 9, 1985, and would contain preliminary data for July 1985, final data for June 1985, and year-ago data for July 1984.

Two copies of each release are to be sent to the BLS regional office and two copies to BLS-Washington, at

Bureau of Labor Statistics
Office of Employment and Unemployment Statistics
Room 2089, GAO Building
441 G Street, N. W.
Washington, D. C. 20212

Any special press releases issued by the States are also to be sent to the BLS Regional Office and to BLS-Washington.

12.3.3 Annual and Historical Releases

State agencies are encouraged to publish annual releases including, at a minimum, any series that were revised as a result of the most recent benchmark revision. (See Sections 10 and 11.) These annual releases are to show at least as much industry detail as the State's monthly press releases.

A report containing complete time series up to the present time -- for at least the continuous series that appear in the annual release -- are to be published periodically. If historical data are published for series that are not continuous, then the series are to be clearly footnoted to indicate the time and the reason for the series break, for example, "SIC 34 is not comparable before January 1972 due to changed industry coverage."

12.4 FORMAT AND CONTENT OF RELEASES

12.4.1 Uniformity of Tables

Since many users of CES data require information from several States or areas, individual State publications will be more useful if they have comparable formats. States must include data for the current month, data for the previous month, and data for the current month a-year-ago. It is also suggested that the benchmark month and year of the estimates appear in a note on the tables. Series are normally ordered numerically, by series code, in the publication. This is the same order as they appear in the Standard Industrial Classification (SIC) Manual, with totals appearing above each group of detail data, except for durable and nondurable manufacturing totals. The two-digit industry components of these totals are to reflect the order indicated in Section 12.5.3.

When publishing hours and earnings data for a particular industry, the corresponding series for all employees and production workers must also be published. Transmit all published CES series to BLS-Washington according to the instructions in Section 7: CES State and Area Estimates -- Processing and Transmittal.

12.4.2 Rounding Published Estimates

Employment Estimates. At the most detailed published level, an employment estimate is the sum of its component basic estimating cells, if any, and is rounded to the nearest 100. When the remainder is 50 or more employees, estimates are rounded up to the next hundred; if it is 49 or less the estimate is rounded down. The only exception to this procedure applies to published cells with fewer than 2,000 employees. These estimates may be rounded to the nearest 50 for State publications (for example, an all employee estimate of 1530 would be rounded to 1550). BLS publishes estimates rounded to the nearest 100 regardless of the size of the cell.

Published estimates that represent aggregates (that is, combinations of other published cells) are to be summed from rounded published estimates. As a result, the figure published for total nonagricultural employment must equal the sum of published employment estimates for the industry divisions. Likewise, published manufacturing employment must equal the sum of the published estimates for durable and nondurable goods.

Hours and Earnings Estimates. For publication, average weekly hours (AWH) are to be rounded to one decimal place (for example, 37.8), and average hourly earnings (AHE) are to be rounded to the nearest cent (for example, \$5.93). Every published average weekly earnings (AWE) estimate must be the product of the rounded average weekly hours (AWH) estimate and the rounded average hourly earnings (AHE) estimate published for that cell. Published estimates of average weekly earnings (AWE) are to be rounded to the nearest cent (for example, $37.8 \times \$5.93 = \$224.15$).

12.4.3 Narrative Analysis

All publications are to include analytical text. This analysis highlights the major trends affecting the published data for both short-term and the long-term periods. Graphic illustrations depicting major elements of the data in the publication are highly recommended additions to State publications.

12.4.4 Source References and Explanatory Notes

On all releases of CES data, reference is to be made to the cooperative nature of the survey (for example, "Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics").

When the release is confined to employment, hours, and earnings data obtained from BLS 790 schedules, the reference to BLS is appropriate on the masthead of the release. When these data are combined with other labor market information, cite the cooperative nature of the survey in a footnote. Tabular presentations with CES data are to contain a footnote similar to the following, unless such technical information is mentioned elsewhere in the release:

"Data cover full-time and part-time employees who worked during or received pay for the payroll period that includes the 12th of the month. The data exclude the self-employed, volunteers, unpaid family workers, and domestic workers. Persons on sick leave, vacations, or holidays, and being paid for that period by their employer, are considered employed. Payroll and worker-hour data are collected for production and related workers in manufacturing industries, nonsupervisory workers in private service-producing industries, and construction workers in construction industries. The earnings figures are "gross" figures; that is, they reflect changes in wage rates, shift differentials, and premium pay for overtime work. The hours figures relate to the hours for which pay was received; this is different from scheduled or standard work hours."

When a series is revised for months not shown in the current release, the current data are to be footnoted to indicate that they are not necessarily comparable with previously published data. When the noncomparability is due to a benchmark revision, this is to be stated in a footnote. Interim revisions are also to be mentioned in a footnote. If States publish all of the revised data at once, then there is no need to use this footnote. As noted earlier, States should annotate tables with the appropriate benchmark year and month.

12.4.5 Seasonally Adjusted Series

Seasonally adjusted estimates, if published, are normally contained in the same publication as the unadjusted data; but it is appropriate to publish several consecutive months of data to show the trends of the data when they are seasonally adjusted. For example, BLS-Washington publishes 13 consecutive months of seasonally adjusted data in Employment and Earnings.

Seasonally adjusted data should be noted to distinguish them from unadjusted data. This can be done by displaying the data in a separate, clearly labelled table, as columns of a table with column headings indicating the data are seasonally adjusted, or as rows of data where seasonal adjustment is indicated in the titles of the table stub.

Seasonally adjusted CES data are a useful tool for economic analysis. Seasonal trends in many industries can seriously distort the over-the-month changes in employment, hours, and earnings. The seasonal adjustment process substantially reduces this distortion.

All States are urged to use the method of seasonal adjustment used by BLS. Currently, BLS is using the X-11 ARIMA method of seasonal adjustment to produce seasonally adjusted data and projected seasonal factors. This adjustment is completed annually, coincidental with the benchmark revisions. The X-11 ARIMA seasonal adjustment program provides detailed charts, tables, and statistical measures that need to be reviewed before the seasonally adjusted series can be accepted as being statistically sound. Detailed documentation of this method is available through the BLS Regional Office upon written request.

12.5 SELECTING INDUSTRY DETAIL

12.5.1 General

To facilitate comparisons of State or area economies, a degree of standardization of published series is necessary. To this end all States are to publish estimates for total nonagricultural employment and industry divisions for Statewide and for all published areas. The industry divisions in the CES survey are mining; construction; manufacturing; transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; services; and government.

Statewide industry divisions are not to be combined for publication. Area industry divisions are not to be combined except when the special circumstances detailed below occur; then mining may be combined with construction.

Mining estimates are to be published separately whenever possible. When an adequate sample exists and the CES confidentiality criteria (see Sec. 12.4) can be met, mining is to be published. When the mining sample is inadequate, estimates are to be published based on UI trend links, composite links, or constants if the confidentiality criteria in the ES-202 Manual can be met.

If the confidentiality criteria cannot be met and written permission to publish cannot be obtained from the reporters involved, a combined series, construction and mining, is to be published until it becomes possible to publish mining as a separate series.

Footnote the combined series to indicate that it includes mining employment of fewer than _____ employees that cannot be published separately. (The footnote is to contain a figure only high enough to prevent disclosure.)

NOTE: (a) When mining employment does not round up to 100 on a regular basis (that is, in most months the unrounded estimate is between 0 and 49, inclusive), mining is not to be published separately or combined with another industry that is published.

(b) Generally, the small mining establishments located in metropolitan areas are engaged in the mining of sand and gravel, the quarrying of limestone and clay, and similar activities. Since these are closely related to local construction activity, it is appropriate to combine mining with construction when this becomes necessary. However, these industries are only to be combined in cases where confidentiality must be protected. Otherwise, mining and construction are to be published separately.

In addition to the industry divisions listed above, every State is to produce, for publication, Statewide estimates for wholesale trade, retail trade, federal government, and State and local government. States also are to produce area estimates for these four categories, if the sample size is sufficient.

When choosing industries for publication at the two-digit SIC level or finer, States must consider what industries are important to the State or area among the two-, three-, or four-digit industries. However, series must be validated by the BLS regional offices before they are cleared for publication. For example, a State that publishes SIC 33, primary metal industries, may have most of its employment for SIC 33 in blast furnace and basic steel production, SIC 331. In this situation, the State would publish SIC 331 in addition to SIC 33, as long as both series are validated by the BLS regional office. If no other three-digit industries under SIC 33 were important to the State or area, then the State might publish a residual category for all three-digit SIC industries in SIC 33 except SIC 331. (See Section 9.2.1 for the establishment of estimating cells for estimating purposes.)

12.5.2 Series Titles

The industry titles used for published series are those given in Appendix E.2: Master List of Series Codes and Titles for Published State and Area Statistics in the CES Survey. To start a new published series, see the procedures provided in Section 6.2.2.

12.5.3 Composition of the Durable and Nondurable Groups in Manufacturing

If the durable and nondurable manufacturing groups are published, the composition of these two groups is to be as follows:

<u>Durable Goods</u>	<u>2-digit SIC</u>
Lumber and wood products	24
Furniture and fixtures	25
Stone, clay, and glass products	32
Primary metal industries	33
Fabricated metal products	34
Machinery, except electrical	35
Electric and electronic equipment	36
Transportation equipment	37
Instruments and related products	38
Miscellaneous manufacturing industries	39

<u>Nondurable Goods</u>	<u>2-digit SIC</u>
Food and kindred products	20
Tobacco manufactures	21
Textile mill products	22
Apparel and other textile products	23
Paper and allied products	26
Printing and publishing	27
Chemicals and allied products	28
Petroleum and coal products	29
Rubber and miscellaneous plastics products	30
Leather and leather products	31

12.6 REPORTING A MEASURE OF STATISTICAL ERROR

Each State must report some measure of error in the published data. Show at least the most recent benchmark revision, both level and percent by industry division. The root mean square error (see BLS working paper, "Computation of Measures of Reliability for BLS-790 Estimates, 1983") or some other measure of relative error may be used to show the degree to which the estimates deviate from the universe level (for employment). A table listing the average revision between preliminary and final estimates is also useful to the data user as an indication of the reliability of preliminary estimates. Calculate the data for this table each year, preferably during the annual benchmark revision process, for each industry division; they should be an average of monthly revisions from a period of at least one year. Every monthly and annual release must address this issue of statistical error, if not by displaying the measures, then by referring the user to another source that does, preferably a publication that includes CES data. At a minimum, cite such measures as available and provided upon request.

12.7 ESTIMATES NOT BASED ON ADEQUATE SAMPLE DATA

Current estimates that are not based on adequate sample data (See Section 11) are not to be published separately, but only in combination with other estimating cells. If the series has a temporarily inadequate sample and is a series for which data are ordinarily published, then the States are to show "not available" in the current publication. If the missing sample data are subsequently received the following month, the estimate may be published in the regular release. If a few months pass before an adequate sample is received, then the estimates for the prior missing months are to appear as a footnote in the current month's release. If the sample deficiency continues for several months and appears to be permanent, publication of the series is to be discontinued and the release properly footnoted. If this series continues to be important, then the State must improve the sample to allow publication of the series. (See Section 3: Sampling.)

12.8 RESTRICTIONS ON THE PUBLICATION OF DATA DUE TO DISCLOSURE REQUIREMENTS

12.8.1 Confidentiality of Individual Establishment Data

The CES survey relies on voluntary reporting by respondents and guarantees participants in the survey that information on their establishments will be held in the strictest confidence.

The data are to be used only for statistical purposes. Precautions must be taken to insure that no information is released to the public that would lead to the identification of an individual respondent's reported information, unless written permission is obtained from the reporter prior to the release. Letters of permission must be cleared with the appropriate BLS Regional Office. Each State is to maintain a file of reporters that have agreed to have their data released to the public. Such a file is necessary in order to monitor any change in ownership by companies that previously permitted the release of their data. When a State agency discovers that a change in ownership has occurred, it must obtain a new letter of approval from the company or discontinue publication of affected series.

The term "public" in the paragraph above includes any local, State, or federal government agency not directly involved in the CES survey, even if such an agency is a reporter. This regulation is a contractual arrangement between BLS and each cooperating State agency. Each BLS 790 schedule carries a confidentiality statement to this effect. As cooperating agencies, the States are further responsible for keeping the identity of individual reporters in the CES survey confidential.

12.8.2 Disclosure Rules

Two basic rules exist to insure that individual reporter data are not released to the public without written permission.

- a. If there are fewer than three firms (that is, three companies rather than three establishments) in the sample for an industry, estimates for that industry may not be published without written permission from each reporter.
- b. If there are three or more firms in the sample, but employment of one firm equals 80 percent or more of the universe employment, written permission must be obtained from that firm before estimates may be published for the industry.

Both rules must be followed to determine whether or not estimates may be published. These rules are not affected by the Freedom of Information Act. These two disclosure rules also apply to U.S. Department of Defense civilian installations. There are no restrictions for publishing employment data for other federal government agencies.

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Section 13: RECORDS AND FORMS13.1 INTRODUCTION - SCOPE OF SECTION

The quality of a statistical operation depends upon:

- . the original data collected
- . the system of records maintenance

The records problem for the CES survey includes:

- . identifying and controlling a current sample
- . compiling a concise and complete history of these data

The use and disposition of records and forms is covered in this section under the following broad categories:

- . data collection, or the samples
- . statistical analysis of data, or the estimates
- . universe preparation, or the benchmarks
- . administrative forms

A completely uniform system of records and working forms is not feasible because of the varying size, facilities, and organization of the State agencies. However, certain forms provided by BLS must be used by all the State agencies for certain operations. This applies mainly to the collection of data from reporters and the reporting of various statistical and administrative data to BLS.

Generally, only the functions of such State agency documents as internal records, tabulations, and worksheets are prescribed; their form is up to the State agency. A major influence here is the extent of automation in the State agency. BLS standard forms are available for some of these functions or a format is suggested which may be adapted. Exhibits of all BLS standard forms for State agency use are included as Appendixes B and C of the Manual.

Whenever possible, the State agency should obtain microfiche copies of tabulations, forms, and schedules and retain the microfiche rather than the hard copy. In addition, when possible, the State should use magnetic tape or disk to store large amounts of data which must be kept for future use in such activities as benchmark and, especially, for SIC revisions. State agency retention periods for records are included in the appropriate subsections that follow. They are summarized in the Summary of Records/Forms, Exhibit 13-A, at the end of this section.

The retention periods are minimums set to adhere to Federal laws governing records retention or to provide for reasonable operation of the CES program in the States. A State agency may lengthen the retention periods, but may not shorten them.

Carefully determine the possible future use of records before destroying them. Historical records, schedules, product or activity statements, worksheets, and benchmark tabulations may be very useful when preparing revised historical series, special tabulations, etc.

13.2 SAMPLE RECORDS

13.2.1 Introduction

CES sample members must be properly identified using the standardized coding instructions contained in this manual. The information can be efficiently maintained in machine-readable form (magnetic tape, disk, etc.) for easy access and for mechanical manipulation of the data for review purposes.

13.2.2 Reporter Identification Records

A. Master File

The State agency must maintain a master file containing identification data for every active reporter in the CES sample.

The master file should be maintained on hardcopy for review purposes in several sequences:

- . alphabetical
- . by CES report number
- . by SIC code by employment size

The master file may be maintained on:

- . machine-readable form (magnetic tape, disk, etc.)
- . computer printouts
- . interpreted punched cards
- . 3x5 cards

For each reporter the master file should show at least the following items:

- | | |
|--------------------------|------------------------------------|
| . name | . National Key Reporter code, |
| . address | if applicable |
| . CES report number | . auxiliary code |
| . industry code (SIC) | . program status code |
| . establishment location | . contact person and telephone no. |
| (for multiunit firms) | . FIPS county code |
| . UI report number | . ownership code |

If one establishment submits several reports covering different groups of employees (e.g., salaried, hourly-rated), the master file should indicate the group which is covered by the report number in each case. Cross-reference by plant or by division name may be appropriate.

B. Cancellation File

The State agency should maintain a file of cancelled reports. A single file in report number or alphabetical order meets BLS standards.

A cancellation file may be maintained on:

- . machine-readable files (coded)
- . computer printouts
- . office record cards (SO-227)
- . master file cards

Record the circumstances of the cancellation on the card or printout or assign a Program Status code as follows (to be kept on the State's computer files only):

- . "4" Refusal to participate further
- . "5" Out of Business
- . "6" Out of Scope for CES
- . "7" Assigned a new CES Report Number

Minimum Retention Period: retain for at least three calendar years after the reference year.

C. Registry Listings and Related Tabulations

1. Listings Provided by BLS

Twice a year, BLS provides each State agency with a computer printout of the State's sample reporters as they appear on the National

Registry. A magnetic tape containing this information is available upon request. Once a year, the National Registry is provided on microfiche, in the following three sort sequences:

- . by report number
- . by industry by employment size
- . by company name (alphabetic)

The National Registry listing in report number sequence is the control list maintained for the identification of all reporters in the National sample and for the continuing assignment of new report numbers.

The use and maintenance of the National Registry listing is covered in detail in Section 5.

Copies of the National Registry listings do not replace the State agency's master file.

Minimum Retention Period: retain until new National Registry listings are received and verified.

2. Listings and Related Tabulations Produced in State Agency by Computer

When a State agency automates the registry function, it should follow the BLS coding standards provided in this manual.

13.2.3 Data Records

A. Basic Sources

1. BLS 790 Schedules

The BLS 790 schedules constitute the basic record of sample data in the CES survey. The use of the schedules as well as their editing and processing is covered in detail in Section 6. The schedules themselves are exhibited in Appendix B.

Minimum Retention Period: retain for at least three calendar years after the reference year.

2. Industry Classification Statements

The BLS 3023 Industry Classification Statements or equivalent State forms constitute the basic record of nature-of-business information of CES reporters. These forms are collected and maintained by each State Employment Security agency for every employer that is covered by the Unemployment Insurance program. These forms should be accessible to State CES personnel to verify the industry code that is assigned to

each CES reporter by the State Employment Security agency. (See Section 2 for detailed information).

The State agencies should also retain any auxiliary information obtained concerning establishments' industrial activity.

Minimum Retention Period: The State Employment Security agency must retain Industry Classification Statements for at least three calendar years after the reference year and until a current BLS 3023 is collected.

3. National Reporter Schedule Photocopy

The National Reporter BLS 790 schedule photocopy is a primary data source used to send data for National Reporters (nonconstruction) from BLS to the appropriate State agencies. The State agency will retain the most recent copy each month. See Section 6.5 for a description of National Reporter processing.

Minimum retention period: retain for 3 years the final monthly photocopy for the year, which will show all months of data.

4. SO-228, Transcript for Multistate Construction Schedule (BLS 790B-M) and SO-220, Historical Record of Multistate Construction Firms

The SO-228 form is a primary data source used by the home State to transmit data for multistate construction reporters to other State agencies. See Section 6.5.1 for a description of the use of this form.

Minimum Retention Period: States receiving this form from the home State should retain it for at least three years following the data's entry on the Office Record Card, SO-227, or the equivalent.

The home State agency should maintain a check on the continuity of the reports of the out-of-State activity of multistate construction reporters. This can be done readily by maintaining form SO-220, Historical Record of Multistate Construction Firms, which shows a monthly record for one year of the States in which a multistate firm operates. See Section 6.5.1 for more detailed instructions.

Minimum Retention Period: retain for at least three calendar years after the reference year.

5. Special Monthly Data Sent to the State Agencies by BLS

Monthly employment data for Class I railroads and for Western Union are sent to the State agencies each month by BLS under cover of a standard transmittal sheet (Form SO-17).

Minimum Retention Period: retain these data for at least the three calendar years preceding the most recent benchmark and for the subsequent period.

B. SO-227, Office Record Card

The Office Record Card is a running record of the monthly CES microdata for each reporter. An adaptation of this card may be used, such as machine-posted punched cards or a computer-produced printout.

The Office Record Card can be used for various purposes, such as:

- . data record for active reporters
- . record of cancelled reports
- . record of delinquency control information

The SO-227 provides space for all report identification information to be posted from the BLS 790 schedule as well as space to enter data from the BLS 790 schedule each month for up to 13 months, beginning with December of the previous year. Payrolls and hours may be posted either (1) as reported or (2) converted to weekly equivalents. The SO-227 can be used up to two years, one year on each side.

Enter the name of the person to contact in the establishment and any special mailing instructions on the Office Record Card. It is a good practice to note unusual occurrences on the card and to enter information needed for future editing, such as dates of shutdowns and the number of employees involved. Notations of the mailing dates of delinquency notices are also advisable.

Minimum Retention Period: retain the SO-227 or the equivalent for at least the three calendar years. The microdata should be kept in some form (magnetic tape or disk storage, for example) permanently, or at least through the subsequent SIC revision.

13.2.4 Delinquency Control Records

The monthly samples often vary in composition because of reporter oversight or inclination to discontinue reporting. Therefore, a delinquency control system is necessary in order to maintain the greatest possible degree of sample comparability from month to month.

A. Manual System for Delinquency Control

The simplest manual system consists of shifting Office Record Cards to a separate file as data are received and entered. The remaining cards constitute the delinquency file at any particular time. The delinquency file provides the basis for regular and special follow-ups by mail, telephone, or personal visit. See Sections 6.2.2 and 3.2.4 for a discussion of delinquency follow-up procedures.

B. Automated System for Delinquency Control

When a State agency automates the delinquency control function, the system should be capable of producing the following:

- (1) Control listing showing the report identification of delinquent reports, all data for the last reported month, and the report location (address), contact person, and telephone number.
- (2) Address label for sending a delinquency follow-up letter, or computer-generated delinquency postcard.

C. Delinquency Postcards

There are three types of delinquency postcards provided by BLS for State agency use. Each card is offered as either a 5 1/2" x 3 1/2" postcard or a 7 1/2" x 3 1/2" pinfeed card. The three types of cards and their corresponding pinfeed version are as follows:

<u>Standard</u>	<u>Pinfeed</u>
BLS 790K	BLS 790N
BLS 790L	BLS 790O
BLS 790M	BLS 790P

Forms BLS 790M and BLS 790P indicate that data for "last month" have not been received. Forms BLS 790K and BLS 790N provide a space for the State to indicate the specific month requested. Forms BLS 790L and BLS 790O are a general reminder to complete and mail BLS 790 schedules promptly each month.

States should maintain a year's supply of postcards. When ordering postcards, six weeks should be allowed for handling, printing and shipping the standard cards and three months for the pinfeed cards. The minimum request for standard cards is 1000 and is 10,000 for pinfeed cards. Samples of the printing masters for the six cards are shown in Appendix C. States also have the option of printing their own delinquency postcards. Funds for this purpose can be included in the LMI Cooperative Agreement.

13.2.5 Schedule Processing Forms

A number of standard forms are available to expedite the transmittal of schedule-collected data and related information from the State agencies to BLS-Washington. (See Sections 6 and 7 for detailed instructions.)

A. Schedule Transmission -- Transmittal Sheet

1. SO-242, Transmittal Sheet

A Transmittal Sheet, SO-242, must be completed for any transmittal of the following:

- . schedules
- . schedule substitutes
- . punched cards
- . magnetic tapes

Detailed instructions are located in Section 6.7, and on the form itself.

The State agency should maintain one of the following:

- (1) a file of copies or (2) a log book.

Minimum Retention Period: retain copies for at least one year or maintain a log book.

2. SO-241, Block Control

Block Control forms, SO-241, must accompany any transmission of schedules to BLS (one SO-241 form with each block of schedules). The SO-241 is only used when transmitting schedules.

A block should contain no more than 250 schedules, which should be grouped by type within a block or in separate blocks.

Assign block numbers serially beginning with the first block of January data each year.

Minimum Retention Period: retain copies for at least three months or maintain a logbook.

B. SO-226, Schedule Substitute and Correction Form and SO-266, Flag Slip

1. SO-226, Schedule Substitute and Correction Form

This is a multipurpose form designed to be used as follows:

to transmit original data in lieu of the normal method whenever desired;

- . to transmit additional data for a report submitted previously with some data items omitted;
- . to transmit corrections to previously-reported data.

See Section 6.7.6 for detailed instructions.

2. SO-266. Employment and Payrolls Flag Slip

The Flag Slip, SO-266, is used by BLS for the following:

- . to request the State agency to verify or explain questionable data or codes showing unusual changes.
- . to request the State agency to supply missing or needed information on employment, payrolls, or hours.

Section 6.7.7 describes the uses of this form in more detail.

13.2.6 SO-229. Registry Transmittal Form

The Registry Transmittal Form may be used for the following:

- . to transmit Registry information for new sample reporters for the CES survey;
- . to transmit information on cancellations or Registry changes in the CES survey. Registry changes may involve changes in an establishment's name, location, program status, auxiliary status, and/or ownership status;
- . to transmit requests for changes in SIC code assignments for reporters in the Registry.

The SO-229 is a 3-copy form. An original and one copy should be sent to the appropriate Regional Office. The State agency should retain one copy until an approved copy is received from the Regional Office.

Minimum Retention Period: retain the State copy or other record of Registry update until the actions are reflected in new Registry listings.

13.3 ESTIMATES

13.3.1 Introduction

A uniform system of tabulations, worksheets, and reporting forms within a State agency has the following benefits:

- . personnel training and supervision is simplified
- . greater division of labor is possible
- . the chance of error is minimized
- . the preparation of estimates is expedited
- . the transmission of estimates to BLS-Washington and the BLS Regional Offices is also expedited

The tabulation and worksheet formats may be flexible to some extent, but the forms and formats used to transmit estimates to BLS are standardized.

13.3.2 Tabulations

A. Introduction

The form and detail of a State agency's tabulations depend upon the equipment available and the needs of the agency. Section 7 describes the requirements for transmitting State and area estimates to BLS-Washington.

B. Minimum Requirements

The following are the minimum requirements for the State agencies in regard to tabulations they must produce:

1. a tabulation for the State and for each MSA showing for the current and previous months' matched sample totals for each estimating cell for:

- | | |
|------------------------|-------------------------------|
| (1) all employees | (4) payroll |
| (2) women workers | (5) hours |
| (3) production workers | (6) overtime hours (optional) |

Minimum Retention Period: retain for at least the two calendar years preceding the most recent benchmark and for the subsequent period.

2. a tabulation for the State and for each MSA showing for the current and previous months the data reported by each individual sample reporter (in ascending report number order) for each estimating

cell; also include any comment codes reported; this tabulation is very useful when analyzing the data.

Minimum Retention Period: retain for at least the two calendar years preceding the most recent benchmark and for the subsequent period.

3. a tabulation for the State and for each MSA showing delinquent reporters and data for the previous month (if available).

Minimum Retention Period: retain for at least the two calendar years preceding the most recent benchmark and for the subsequent period.

C. Automated Requirements

When a State agency automates a particular function in the processing of CES estimates, BLS recommends that the following standards be followed in regard all tabulations to be produced.

1. Employment Tabulations

Produce a detail listing of the all employees, women workers, and production workers data items for each reporter for the current and previous months for the State and each MSA.

The tabulation should also show the following cell totals:

- . the total number of reports in the sample
- . the number of reports received
- . the number of reports matched
- . the number of all employees
- . the number of all employees for reports reporting production workers (whether or not payroll and hours are reported)
- . the number of all employees and women workers for firms reporting women workers
- . overtime hours in manufacturing

The cell totals can be broken down into two groups: (1) atypical and (2) typical, if desired.

In addition, the tabulation should show the estimates based on the sample cell totals for each basic estimating cell for all employees, women workers, and production workers. Estimates rounded according to BLS policy are to be shown for each summary cell also.

Minimum Retention Period: retain for at least the two calendar years preceding the most recent benchmark and for the subsequent period.

2. Hours and Earnings Tabulation

Produce a detail listing of the production workers, payroll, hours, overtime hours, average weekly hours, average hourly earnings, and average overtime hours (where appropriate) for each reporter for the current and previous months for the State and each MSA. The detail list should be followed by the corresponding data items for the estimating cell.

The cell totals (or averages) are based on the number of production workers, hours, and the payroll from only those reporters reporting all three data items for both the current and previous months. When overtime hours estimates are to be calculated, the listing should show the number of production workers and the overtime hours for reports that show both items for both months.

In addition, the tabulation should show the estimates based on the sample totals (or averages) for each basic estimating cell:

- . average weekly earnings
- . average weekly hours
- . average hourly earnings
- . payroll aggregates
- . hours aggregates
- . number of production workers
- . overtime hours aggregates
- . average weekly overtime hours

Comparable estimates should also be shown for each summary cell.

Minimum Retention Period: retain for at least the two calendar years preceding the most recent benchmark and for the subsequent period.

3. Tabulation Options

The Employment tabulations and Hours and Earnings tabulation covered above may be combined into a single tabulation if desired. If they are separated, however, differing cell structures may be used. It is also allowable to have separate tabulations showing the individual reports on one and the cell totals (averages) on the other.

13.3.3 Worksheets

The State agencies may design various worksheets to meet their requirements in connection with their systems which produce employment, hours, and earnings estimates. The worksheets should be uniform for

both the State series and the MSA series as well as from month to month.

Minimum Retention Period: retain for at least the three years preceding the most recent benchmark revision and for the subsequent period.

13.3.4 Graphs

Each State agency should graph series of the monthly estimates of employment, hours, and earnings. A simple line graph provides an effective means analyzing a series for long-term trends, short-term changes, and general reasonableness. CES employment series can easily be compared to comparable ES-202 series.

Graphs should be maintained for the following employment series if possible:

- . industry divisions
- . major subdivisions
- . all published industries
- . each estimating cell and higher level published

In addition to the CES data, the corresponding ES-202 data should be plotted on the charts.

Regular review of the graphs will often reveal developing weaknesses in the estimates before they become serious. The graphs can be very helpful in determining the extent of adjustment to new benchmark levels. Graphs are excellent visual aids for use in training new employees as well as in discussions with data users.

Minimum Retention Period: retain graphs for as long as they are useful.

13.3.5 Forms For Reporting Estimates to BLS

A. General

Section 7 discusses the preparation and transmittal of State and area CES estimates to BLS.

The following forms meet the format specifications for transmitting and storing State and area estimates. The data formats discussed below are displayed as Exhibit 7-B following Section 7.

B. SO-235, BLS Monthly Report on Employment, Hours, and Earnings

Use this form to report Statewide and area current monthly estimates.

Minimum Retention Period: State copies of the completed SO-235 form, or computer-produced data files or facsimiles of this form, are to be kept until completion of the next benchmark adjustment. (Comments on the back of the monthly forms or on the comment code form (SO-235C) can be helpful when adjusting estimates to new benchmarks or preparing historical analyses).

C. SO-234, BLS Annual Report on Employment, Hours, and Earnings

Form SO-234, BLS Report on Employment, Hours and Earnings, is used to send 12 months of Employment, Hours, and Earnings data and annual averages for a calendar year to BLS.

The SO-234 form is prepared when:

- . new benchmark levels are introduced
- . series are corrected for interbenchmark periods
- . new series are introduced (for previous data only)

These activities are discussed in detail in Section 7.

Minimum retention period: Retain the SO-234 forms, computer generated facsimiles, or computer files of these estimates for at least two years.

13.4 BENCHMARK RECORDS AND WORKSHEETS

13.4.1 Introduction

There are three types of benchmark records and worksheets:

- . those dealing with the identification of large establishments
- . those dealing with the use of UI and related data forming the benchmark
- . those dealing with the adjustment of the estimates to new benchmark levels

The formats of the various tabulations and worksheets involved may vary among the State agencies. However, for a given State, the convenience of familiarity suggests a fairly rigid internal system.

The records described below or some adaptation of them providing the same information should be used. If automatic data processing equipment is accessible, it can provide for such adaptation.

13.4.2 Identification of Reporters in Benchmark

A. Reporters Covered by UI

Benchmark preparation requires that for each CES reporter covered by unemployment insurance (UI), the CES 790 employment be matched with the employment on the employer contribution report. This matching is done on the basis of the UI account number previously determined to be applicable to the particular CES reporter (e.g., at the time a new report number was assigned or when the preceding benchmark was being prepared).

When a BLS 790 report does not agree with a contribution report or a contribution report cannot be identified as covering the same BLS 790 reporter, it may be necessary to refer to the units or to the identification records of covered employers to obtain information to resolve the discrepancies.

B. Industry Segments Not Covered by UI

Some employers not subject to UI coverage are:

- Nonprofit organizations that employ less than four workers - Identification sources: BLS 790 reports, association listings, telephone directories
- Railroads - Identification sources for Class I Railroads are the periodic listings from BLS-Washington (see Appendixes A.1 and A.3).

13.4.3 Benchmark Tabulation

A. Minimum Requirements

As a minimum, the State agency must prepare for each benchmark a tabulation showing employment reported on each individual UI contribution report for the benchmark quarter. This tabulation facilitates checking for UI - CES differences in reporting patterns, industry classification, and employment.

Minimum Retention Period: retain for the three most recent benchmarks.

B. Automated Requirements

If a State agency automates this function, BLS recommends that the following standards be followed in regard to the tabulations to be prepared.

- A tabulation by estimating cell, showing 15 months of data, printed separately for the State and for each MSA. Each listing should show: (1) ES-202 employment, (2) over-the-month changes in ES-202 employment, (3) BLS 790 employment, and (4) over-the-month changes in BLS 790 employment, (5) differences in the over-the-month changes between the series.
- A 15-month comparison listing of ES-202 reports, BLS 790 reports, and local reports showing identification information and employment data for each report, by industry, and if necessary, by size.
- A listing of strikes reported in the CES survey for the desired time period.

Minimum Retention Period: retain each of the above for the three most recent benchmarks.

13.4.4 SO-221, Benchmark Control Card

The Benchmark Control Card, SO-221, can be used if the matching of CES and UI reports is done manually (see Section 10.3.5.A). Normally, maintain one card for each CES report. If individual establishments of a multiunit firm submit separate CES reports, maintain a card for each individual establishment.

Conversely, one CES report may cover several establishments of a company submitting individual UI reports by establishment. If so, use a "trailer card" to enter the separate UI report data, allowing space on the "summary card" for totals which should be comparable with the CES report.

Each side of the Benchmark Control Card, SO-221, may be used for four (4) periods. Enter the items indicated on the form for each period when available. Enter the UI industry code used for the first-quarter ES-202 (i.e., the benchmark quarter). Enter the CES industry code assigned on the basis of information on the Industry Classification Statement (ICS) for the calendar year preceding the benchmark period. See Section 1 for additional information. Maintain a card for each large UI reporter that does not submit BLS 790 reports, showing UI data.

Minimum Retention Period: Retain the work records prepared in the process of matching CES and UI reports (whether Benchmark Control Cards or the equivalent) and in resolving any differences for at least the three most recent benchmarks.

13.4.5 Benchmark Worksheets

A. Benchmark Preparations--Worksheets

The adjustments to UI data necessary to establish an employment benchmark are discussed in detail in Section 10. Adjustments to the basic UI data can be performed best using an established system of worksheets.

Many States have automated these operations. The format of the computer printouts should provide appropriate identification of each component.

Minimum Retention Period: retain the worksheets and auxiliary forms for at least the three most recent benchmarks.

B. Adjustment to New Benchmark Levels--Worksheetss

An example of the difference listing which compares original estimates with new benchmark levels is shown in Section 11.

Minimum Retention Period: retain worksheets and auxiliary forms for the three most recent benchmarks.

13.4.6 Benchmark Materials Provided by BLS to the State Agencies

Minimum Retention Period: retain benchmark materials provided to the State agencies by BLS for industry segments not covered by UI (e.g., listings, special tables, publications) for at least the three most recent periods for which they have been made available.

13.4.7 SO-207, Annual Report on CES-UI Classification Differences for the National Benchmark

Differences in industry and ownership classification between CES and UI for reports with 100 or more employees should be reported to BLS each year for use in preparing the national benchmark (see Section 10).

Detailed instructions and form SO-207, Classification Adjustment Check, are provided each year to the State agencies, for the purpose of submitting data on classification differences to BLS.

Minimum Retention Period: retain for at least the three years preceding the most recent benchmark and the subsequent period.

13.4.8 SO-270, State Benchmark Information

States are to report the noncovered employment data used in developing their March State employment benchmarks each year. Use form SO-270,

State Benchmark Information, to for transmit these employment counts to the Regional Office. The form provides for entry of presumed noncovered employment (PNC) information.

13.5 ADMINISTRATIVE FORMS

13.5.1 Introduction

Administration of the CES survey requires the preparation of reports by the State agencies dealing with those supplies provided by BLS. Order all supplies through the appropriate BLS Regional Office.

13.5.2 Use of Paid Official Mail

When postage is to be paid by BLS, the following statement must appear on outgoing envelopes or packages:

Postage and Fees Paid
U.S. Department of Labor
LAB 441

Envelopes printed at BLS expense are imprinted with the above indicia. Two types of envelopes are supplied for mailing schedules. The standard business size window envelope with the Labor Department indicia is used for mailing schedules to the respondents. A slightly smaller preaddressed envelope is supplied for replies from the respondents. See copies of envelope masters in Appendix C. Mail all closing data to BLS-Washington (magnetic tapes, punched cards, schedules, listings, etc.) via the express mail programmed service, unless other arrangements have been approved by BLS. For each express mail shipment, a "customer receipt", form USPS 5625, must be filled out. The following must appear on outgoing express mail:

Postage and Fees Paid
U.S. Department of Labor
143-15 Lab 441

13.5.3 Delivery of Envelopes - DL 1-90, Purchase Order and an Important Notice (for Envelope Shipments), Adm. 135

Shortly before the delivery of BLS postage envelopes from the printer, the State agency will receive a yellow copy of DL 1-90, Purchase Order, and an Adm. 135 form.

When the envelopes are received, determine the number of envelopes actually delivered and the number of cartons they were shipped in. Enter this information on the Adm. 135 form.

Since more than one type of envelope can be ordered on a DL 1-90, the delivery of different types of envelopes may be made at different times. Mail separate Adm. 135 forms to the appropriate U.S. Department of Labor Regional Administrative Office (see office name and address at the top of the Adm. 135) immediately after receiving any portion of the order. When all of the order has been received and all necessary Adm. 135 forms have been completed, mail the remaining Adm. 135 forms and the DL 1-90 form, signed and dated, to the address at the top of the Adm. 135.

The States may also print their own envelopes. Funds for this purpose are negotiated for inclusion in the LMI Cooperative Agreement.

Minimum Retention Period: retain copies of DL 1-90 and Adm. 135 forms for a least one year.

13.5.4 Annual Schedule Needs

A technical memorandum is sent to the State agencies by BLS each spring. This memorandum transmits an order form (Form SO-201) for the supply of BLS 790 schedules needed for the following year. Solicitation Flyers are also requested via this form. Schedules are offered in a standard and pinfeed version.

When determining the number of forms of each type to request, provide for the expected number of reporters. Include allowances for: (1) replacements, (2) second requests, (3) requests for file copies, (4) delinquency control, and (5) sample expansion needs. Indicate quantities to the next hundred. Determine estimates carefully in order to avoid costly reorders. All requests for reorders will be filled with standard forms, once BLS's limited supply of pinfeed forms is exhausted. Pinfeed forms are ordered only once a year, therefore, it is especially important to order ample supplies of these forms. It is important that all items on the SO-201 order form be completed. The return address must be exactly as the State expects it to appear on printed schedules. Complete information for the shipping address is important to insure delivery of the schedules. Do not use post office boxes for shipping addresses.

Send the original and one (1) copy of the completed order form to the appropriate BLS Regional Office, and retain a carbon in the State agency for at least one year.

13.5.5 Semiannual Inventory Form, SO-246

Complete this form and forward it to the BLS Regional Office to order additional supplies of forms and envelopes. Order sufficient quantities to last for a year. The timing of this review of operating supplies is optional at the discretion of the Regional Office.

EXHIBIT 13-A

SUMMARY OF RECORDS/FORMS AND RETENTION PERIODS

1. Registry listings (provided by BLS). Retain until new registry listings are received and verified.
2. Registry listings (State-produced). Retain until new registry listings are prepared and verified.
3. Registry Transaction Counts tabulation (State-produced). Retain until the transactions listed have been made successfully.
4. Registry Transaction Errors listing (State-produced). Retain until the transactions listed have been made successfully.
5. Registry Changes, Additions, Deletions listing (State-produced). Retain until new registry listings are produced and verified.
6. BLS 790 Schedules. Retain for at least three calendar years after the reference year.
7. BLS 3023 Industry Classification Statements. Retain for at least three calendar years after the reference year (both supplements and auxiliary information).
8. National Reporter Schedule Photocopy. Retain final year-end copy for at least three calendar years after the reference year.
9. Transcript for Contract Construction Schedule (BLS 790 B-M), SO-228. State receiving this form from the home State is to retain it for a least three years following the data's entry on the Office Record Card, SO-227, or the equivalent.
10. Special Monthly Data Sent to the State Agencies by BLS. -- including monthly memos on employment for Class I Railroads and for Western Union. Retain for at least the three calendar years preceding the most recent benchmark and for the subsequent period.
11. Office Record Card, SO-227. Retain the SO-227 or the equivalent for at least the three calendar years preceding the most recent benchmark and for the subsequent period.
12. Delinquency Control Listings. Retain for at least one calendar year after the reference year.

13. Historical Record of Multistate Construction Firms, SO-220. Retain for at least three calendar years after the reference year.
14. Transmittal Sheet, SO-242. Retain copies for at least three months or maintain a log book.
15. Block Control Form, SO-241. Retain copies for at least three months or maintain a log book.
16. Registry Transmittal Form, SO-229. Retain a copy until an approved copy is received from the Regional Office; retain the approved copy until the actions are reflected in new registry listings.
17. Estimating Tabulations for States and MSAs. These include tabulations of individual report data, sample totals, and estimates, by cell, for employment, hours, and earnings, and related data. Retain for at least the two years preceding the most recent benchmark and the subsequent period.
18. Estimating Worksheets. Retain for at least the three years preceding the most recent benchmark and the subsequent period.
19. Graphs. Retain graphs as long as they are useful.
20. BLS 790 Monthly Report on Employment, Hours, and Earnings, SO-235. Retain for at least two years but do not destroy until after completing the next benchmark adjustment.
21. Report on Employment, Hours and Earnings, SO-234. Retain for at least two years, but do not destroy until after completing the next benchmark adjustment, provided that the State agency has established satisfactory permanent records of the latest monthly data and annual averages for each series for the entire period since the beginning of each series.
22. Annual Averages. Retain the State agency's copies of the annual averages on monthly forms for at least three months after the originals have been sent to BLS-Washington. Be sure to enter the averages in your permanent records.

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23. Benchmark Listings. Retain each of the listings for the three most recent benchmarks.
 24. Benchmark Control Card, SO-221. The work records prepared in the process of matching CES and UI reports (whether Benchmark Control Cards or the equivalent) and in resolving any differences should be retained for at least the three most recent benchmarks.
 25. Benchmark Worksheets. Retain the worksheets and auxiliary forms for at least the three most recent benchmarks.
 26. Benchmark Materials Provided by BLS to the State Agencies. Retain for at least the three most recent periods for which they have been made available.
 27. Annual Report on BLS-UI Classification Differences for the National Benchmark, SO-207. Retain for at least the three years preceding the most recent benchmark and for the subsequent period.
 28. 790 State Benchmark Information, SO-270. Retain for at least the three years preceding the most recent benchmark and for the subsequent period.
 29. Purchase Order, DL 1-90. Retain a copy for at least one year.
 30. Important Notice (for Envelope Shipments), Adm. 135. Retain a copy for at least one year.
 31. Annual Schedule Needs Memorandum. Retain a copy for at least one year.
 32. Government Bill of Lading, SF 1103. Retain a copy for at least one year.
 33. Semiannual Inventory and Requisition of Standard forms for the BLS 790 Survey, SO-246. Retain a copy for at least one year.

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Appendix A: Benchmarks and Related Materials Provided by BLS-Washington

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A.1 BLS Codes for Class I Railroads

A.2 State and Area Employment Benchmarks for Class I Railroad Companies

Appendix A.1: BLS Codes for Class I Railroads and Switching and Terminal Companies

Manual Reference: Sections 6.5.6, 8.6.2, 10.4.2

This appendix contains the latest available codes used by BLS to identify Class I Railroad carriers.

<u>Code</u>	<u>Company Name</u>	CONFIDENTIAL
5	Atchison, Topeka & Santa Fe Railway Co.	
12	Boston & Maine Railroad Co.	
14	Burlington Northern Railroad Co.	
22	Chesapeake & Ohio Railway Co. (includes Baltimore & Ohio Railroad)	
25	Chicago & North Western Transp. Co. & Transp. Subsidiaries	
37	Delaware & Hudson Railway Corp..	
39	Denver & Rio Grande Western Railroad Co.	
45	Soo Line Railroad Co. (includes Chicago, Milwaukee, St. Paul & Pacific Railroads)	
47	Elgin, Joliet & Eastern Railway Co.	
49	Florida East Coast Railway Co.	
54	Grand Trunk Western Railroad Co.	
61	Illinois Central Gulf Railroad Co.	
64	Kansas City Southern Railway Co.	
80	Missouri - Kansas - Texas Railroad Co.	
111	St. Louis Southwestern Railway Co.	
112	Seaboard Coast Line Railroad Co.	
113	Southern Pacific Transp. Co.	
114	Southern Railway (Subsidiary of Norfolk Southern Consolidated System)	
123	Union Pacific Railroad Co. (includes Missouri Pacific)	
128	Western Pacific Railroad Co.	
130	National Railroad Passenger Corp. (Amtrak)	
136	Consolidated Rail Corp. (Conrail)	

Appendix A.2: State and Area Employment Benchmarks for Class I Railroads

CES Manual Reference: Sections 6.5.6, 8.6.2, 10.4.2

1. CLASS I Railroad Employment Benchmark

The March 1985 employment benchmarks for Class I railroad employment were distributed to each State in September 1985, on computer-generated listings, in the following four sequences:

- State by Railroad
- State by County by Railroad
- State by Area by Railroad
- Multistate Areas

See Section 10.4.2 for a description of the employment benchmarking procedure using the factors on these listings.

APPENDIX B: BLS 790 SCHEDULES

Manual Reference: Section 6.2

Attached are samples of the BLS 790 Schedules used in the CES program for data collection. These schedules are as follows:

<u>Schedule Number</u>	<u>Title</u>
BLS 790 A	Report on Employment, Payroll, and Hours - Mining
BLS 790 B	Report on Employment, Payroll, and Hours - Construction
BLS 790 B-M	Report on Employment, Payroll, and Hours - Construction- Intrastate
BLS 790 C	Report on Employment, Payroll, and Hours - Manufacturing
BLS 790 D	Report on Employment, Payroll, and Hours - Transportation, Communication, and Public Utilities
BLS 790 E	Report on Employment, Payroll, and Hours - Trade
BLS 790 F	Report on Employment, Payroll, and Hours - Finance, Insurance, and Real Estate
BLS 790 G	Report on Employment, Payroll, and Hours - Services
BLS 790 S	Report on Employment, Payroll, and Hours - Education
BLS 790 J-L	Report on Employment, Payroll, and Hours - State and Local (Except Schools)
BLS 790 J-F	Report on Government Employment - Federal
BLS 790 J-FD	Report on Government Employment and Payrolls - Federal (Department of Defense)

A set of sample schedules is issued each year by BLS-Washington and should be added as replacement pages to this Appendix.

APPENDIX C: OTHER STANDARD BLS OPERATING AND ADMINISTRATIVE FORMS

Facsimiles of all processing forms currently used in the CES program are included. CES Manual references follow the use of each form.

<u>Form Number</u>	<u>Title or Description</u>	<u>Use of Form and Reference</u>
SO-201	Requisition for Supply of Schedules	To order the supply of BLS 790 schedules and Solicitation Flyers for the following year. 13.5.4
SO-207	Classification Adjustment check	To submit data on classification differences to BLS. 13.4.7
SO-220	Historical Record of Multistate Construction	To provide a historical record of State operations for multistate reporter. 6.5.1; 13.2.3.A.4; 13-A
SO-221	Benchmark Control Card	To record individual establishment information for benchmark purposes. 10.3.3.C.1; 13.4.4; 13-A
SO-226	Schedule Substitute and Correction Form	To transmit original microdata and corrections to previously submitted microdata. 6.7.1; 6.7.6; 13.2.5.B.1
SO-227	Office Record Card	To maintain a record of monthly employment, payroll, and hours data for each sample establishment. 6.3.4; 13.2.2.B; 13.2.3.B; 13.2.4.A; 13-A
SO-228	Transcript for Contract Construction	To transmit data for multistate contract construction to State agencies. 6.5.1.B; 13.2.3.A.4; 13-A
SO-229	Registry Transmittal	Transmittal sheet for coding registry transactions. 5.1.4.A; 5.2.1; 5.5.1; 5.6; 13.2.6; 13-A
SO-234	Annual Report on Employment, Hours and Earnings	To send 12 months of employment, hours and Earnings data and Annual Averages to BLS. 13.3.5.C; 13-A; 7.2.2.B.2; 7.3.2; 7.3.3; 7.5.3; 7.7

SO-234C	Annual Report on Employment, Hours and Earnings-Comment Form	To provide economic comments for the annual reports.
SO-235	Monthly Report on Employment, Hours, and Earnings	To report Statewide and area current monthly estimates. 13.3.5.B; 13-A; 7.3.1; 7.3.3; 7.5.3; 7.7
SO-235C	Monthly Report on Employment, Hours and Earnings-Comment Form	To provide economic comments on the monthly reports.
SO-241	Block Control	To accompany transmission of schedules. 13.2.5.A.2; 13-A
SO-242	Transmittal Sheet	To identify the contents of shipments of schedules, schedule substitutes, punched cards and magnetic tapes to Washington. 6.7.1; 6.7.3; 6.7.4.A.5, 6.7.4.B.3, 6.7.4.B.4, 13.2.5.A.1; 13-A
SO-246	Inventory and Requisition of Standard Forms	Report used by the State agency to notify R.O. of stocks and needs for forms (except schedules). 13-A
SO-266	Flag Slip	To request State agency to 1) verify questionable data or codes or 2) supply missing information on employment, payrolls, or hours. 6.7.7; 13.2.5.B.2
SO-270	State Benchmark	To report noncovered employment data used in developing March employment benchmarks.
BLS 2120A	Punch Card	To submit microdata. 6.7.4.B
BLS 790K BLS 790L BLS 790M	Delinquency Post Cards	To notify respondents that their reports have not been received. 13.2.4.C
BLS 790N BLS 790O BLS 790P	Pinfeed Delinquency Post Cards	
-	CES Return Envelope	For respondents to mail their schedules to the State agencies.
-	CES Mailout Envelope	To send respondents their schedules.

Requisition for Supply of Employment and Payroll Schedules for 198_, SO-201

U.S. Department of Labor

State of _____

Industry Division	SIC Industry Coverage
1. Petroleum and chemicals, except for the C/S program	1300-1399, 2800-2899

RLS Schedule Number	Sample Size
1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
18	100
19	100
20	100
21	100
22	100
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84	100
85	100
86	100
87	100
88	100
89	100
90	100
91	100
92	100
93	100
94	100
95	100
96	100
97	100
98	100
99	100
100	100

Schedule Needs

(Reference Date)

[illegible]

☐ Same as current one (copy allowed)

☐ Different from current one (approval process)

SO 201 (Rev April 1981)

- cc. 1 BLS Washington (route through Regional Office)
- 2 BLS Regional Office

4. ☐ Yes and ☐ No

Classification Adjustment Check -- First Quarter 198_, SO-207

U.S. Department of Labor

Printed Name _____
State _____
Date _____

CES Reports

CES Codes

PA: 00777007

COMBUSTION

479

447

100

14

F5 202 Date

(continued)

Industry

409

Don

•

Index

DO
NOT
USE

Comments

CURRENT EMPLOYMENT STATISTICS MANUAL

APPENDIX C

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Historical Record of Multistate Construction Firm -- 198_, SO-220

Bureau of Labor Statistics
Historical Record of Multistate Construction
Firm-19

U.S. Department of Labor



Symbols: ✓ All employees X Construction workers only 0 Reported no operation in State		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Comment
State and Code														
Alabama	(AL) 01													
Alaska	(AK) 02													
Arizona	(AZ) 04													
Arkansas	(AR) 05													
California	(CA) 06													
Colorado	(CO) 08													
Connecticut	(CT) 09													
Delaware	(DE) 10													
District of Columbia	(DC) 11													
Florida	(FL) 12													
Georgia	(GA) 13													
Hawaii	(HI) 15													
Idaho	(ID) 16													
Illinois	(IL) 17													
Indiana	(IN) 18													
Iowa	(IA) 19													
Kansas	(KS) 20													
Kentucky	(KY) 21													
Louisiana	(LA) 22													
Maine	(ME) 23													
Maryland	(MD) 24													
Massachusetts	(MA) 25													
Michigan	(MI) 26													
Minnesota	(MN) 27													
Mississippi	(MS) 28													
Missouri	(MO) 29													
Montana	(MT) 30													
Nebraska	(NE) 31													
Nevada	(NV) 32													
New Hampshire	(NH) 33													
New Jersey	(NJ) 34													
New Mexico	(NM) 35													
New York	(NY) 36													
North Carolina	(NC) 37													
North Dakota	(ND) 38													
Ohio	(OH) 39													
Oklahoma	(OK) 40													
Oregon	(OR) 41													
Pennsylvania	(PA) 42													
Puerto Rico	(PR) 43													
Rhode Island	(RI) 44													
South Carolina	(SC) 45													
South Dakota	(SD) 46													
Tennessee	(TN) 47													
Texas	(TX) 48													
Utah	(UT) 49													
Vermont	(VT) 50													
Virginia	(VA) 51													
Washington	(WA) 53													
West Virginia	(WV) 54													
Wisconsin	(WI) 55													
Wyoming	(WY) 56													

SO 220 (Rev. August 1977)

Benchmark Control Card, SO-221

Bureau of Labor Statistics
Benchmark Control Card

U.S. Department of Labor



(1) State	(3) Do Not Contact for Sample ☐ (4) Industry <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>19__</td> <td>19__</td> <td>19__</td> <td>19__</td> </tr> </table> (5) Multiple Unit Firm ☐					19__	19__	19__	19__
19__		19__	19__	19__					
(2) Name									
Address									
City and State									
(6) Locations U.I. BLS									

Agency	(7) Codes Assigned			
	19__	19__	19__	19__
U.I.				
BLS				
	(8) Employment in Benchmark Quarter			
	19__ ()	19__ ()	19__ ()	19__ ()
U.I.				
BLS				

Employment and Payrolls -- Schedule Substitute and Correction Form, SO-226
(Front)

Bureau of Labor Statistics
Employment and Payrolls—
Schedule Substitute and Correction Form

U.S. Department of Labor



See instructions on reverse before entering data

[illegible]Return Form to BLS, Washington—Office of Automatic Data Processing Support
SO-226 (Rev. March 1979)

**Employment and Payrolls -- Schedule Substitute and Correction Form, SO-226
(Back)****Instructions for Completing the Employment and Earnings--Schedule Substitute and Correction Form**

This form should be used for the following purposes:

A. As a Schedule Substitute-- (Used to transmit data in lieu of the normal method whenever desired.)

1. All data entered must be numeric, except the data reported in the Transaction Code column (col. 13) which is alphabetic.
2. State must complete columns 1 through 12.
[Payroll and hours may be reduced to a one-week basis, and, if this is done, an "X" should be entered in the L/P column (col. 12). If the payroll and hours are not reduced to a one-week basis, the State should enter in the L/P column the appropriate LP code.
A "0" should be entered when data are reported as zero, and, an "X" should be entered when data are not available. When the report is for a nonmanufacturing establishment, an "X" should be entered in the overtime hours column.]
3. If an Explanatory Code is not required, the State should leave this column (col. 11) blank.
4. The State should enter an "S" in the Transaction Code column (col. 13).
5. The State should enter a "5" in the Card Number column (col. 14). Code 5 denotes an "original entry," and
6. The State should place a green check in the left hand margin of schedule to denote transcription of data.

B. As a Correction Form-- (Used: (a) to transmit all corrections to data previously reported; and
(b) to transmit additional line entries for a report for which previously only a partial entry was made (i.e., previously, only the employment counts were transmitted but now the payroll and hours figures are available.)

1. All data entered must be numeric, except the data reported in the Transaction Code column (col. 13) which is alphabetic.
2. State agencies must complete the month and year reference columns plus the BLS identifying code columns (State, Report Number, and SIC Code columns).
[In the data field columns the State agencies should enter only the item(s) being corrected or added, except when either total hours or total payrolls are being corrected; then, both the total hours and payrolls must be entered.
If the State is only correcting the SIC industry code, the State should complete only the following columns: (a) reference month and years columns plus the BLS identifying code columns. The State should then circle the SIC code.]
3. Payroll and hours data must be reduced to a one-week basis. The State must enter an "X" in the L/P column (col. 12).
4. The State should enter a "C" in the Transaction Code column (col. 13), and
5. The State should enter a "6" in the Card Number column (col. 14). Code 6 denotes a "corrected entry."

CURRENT EMPLOYMENT STATISTICS MANUAL

APPENDIX C

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Employment and Payroll Office Record Card, SO-227

Bureau of Labor Statistics
Employment and Payroll Office Record Card

U.S. Department of Labor



BLS Codes

State	Report Number	Industry		Ownership	Program	Auxiliary	Union	

Name and Mailing Address of Establishment:

Location of Establishment(s)

Year and Month	All Employees		Production Worker or Other Designation				Expl. Code (11)	L.P. Code (12)	Notes
	Both Sexes (6)	Women (7)	Number (8)	Total Payroll (9)	Total Hours (10)	Overtime Hours (10Y)			
19 ____									
Dec.									
19 ____									
Jan.									
Feb.									
Mar.									
Apr.									
May									
June									
July									
Aug.									
Sept.									
Oct.									
Nov.									
Dec.									

GPO 936-898

SO-227 (Rev. Nov. 1978)

Transcript for Contract Construction Schedule (BLS 790 B-M), SO-228

Bureau of Labor Statistics
Transcript for Contract Construction
Schedule (BLS 790 B-M)

U.S. Department of Labor



Mo.	Yr.	State	Report Number	Ind.	Home State (<i>Address all inquiries to this State</i>)						
					Name of Firm (<i>Enter on 1st transcript of firm's data only</i>)						
County or Similar Area (1)	Pay Period		No. of Days		L. P. Code (6)	All Employees		Construction Workers			Expl. Code (12)
	From— (2)	Through (3)	(4)	(5)		Both sexes (7)	Women (8)	Number (9)	Payroll (10)	Man-hours (11)	
			X	X	X						
			X	X	X						
			X	X	X						
			X	X	X						
			X	X	X						
			X	X	X						
			X	X	X						
			X	X	X						
			X	X	X						

Attach second copy of form if space for more entries is needed.

SO-228 (Feb. 1978)

APPENDIX C

CURRENT EMPLOYMENT STATISTICS MANUAL

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Registry Transmittal Form, SO-229 (Front)

Bureau of Labor Statistics
Registry Transmittal Form

U.S. Department of Labor

(Before sending data, see instructions on the reverse) PLEASE TYPE OR PRINT

State		Transmittal No.		Date sent from State		Date sent from Regional Office																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
State FIPS Code	Report Number			Country FIPS Code		1 101 (101)	2 102 (102)	3 103 (103)	4 104 (104)	5 105 (105)	6 106 (106)	7 107 (107)	8 108 (108)	9 109 (109)	10 110 (110)	11 111 (111)	12 112 (112)	13 113 (113)	14 114 (114)	15 115 (115)	16 116 (116)	17 117 (117)	18 118 (118)	19 119 (119)	20 120 (120)	21 121 (121)	22 122 (122)	23 123 (123)	24 124 (124)	25 125 (125)	26 126 (126)	27 127 (127)	28 128 (128)	29 129 (129)	30 130 (130)	31 131 (131)	32 132 (132)	33 133 (133)	34 134 (134)	35 135 (135)	36 136 (136)	37 137 (137)	38 138 (138)	39 139 (139)	40 140 (140)	41 141 (141)	42 142 (142)	43 143 (143)	44 144 (144)	45 145 (145)	46 146 (146)	47 147 (147)	48 148 (148)	49 149 (149)	50 150 (150)	51 151 (151)	52 152 (152)	53 153 (153)	54 154 (154)	55 155 (155)	56 156 (156)	57 157 (157)	58 158 (158)	59 159 (159)	60 160 (160)	61 161 (161)	62 162 (162)	63 163 (163)	64 164 (164)	65 165 (165)	66 166 (166)	67 167 (167)	68 168 (168)	69 169 (169)	70 170 (170)	71 171 (171)	72 172 (172)	73 173 (173)	74 174 (174)	75 175 (175)	76 176 (176)	77 177 (177)	78 178 (178)	79 179 (179)	80 180 (180)	81 181 (181)	82 182 (182)	83 183 (183)	84 184 (184)	85 185 (185)	86 186 (186)	87 187 (187)	88 188 (188)	89 189 (189)	90 190 (190)	91 191 (191)	92 192 (192)	93 193 (193)	94 194 (194)	95 195 (195)	96 196 (196)	97 197 (197)	98 198 (198)	99 199 (199)	100 200 (200)	101 201 (201)	102 202 (202)	103 203 (203)	104 204 (204)	105 205 (205)	106 206 (206)	107 207 (207)	108 208 (208)	109 209 (209)	110 210 (210)	111 211 (211)	112 212 (212)	113 213 (213)	114 214 (214)	115 215 (215)	116 216 (216)	117 217 (217)	118 218 (218)	119 219 (219)	120 220 (220)	121 221 (221)	122 222 (222)	123 223 (223)	124 224 (224)	125 225 (225)	126 226 (226)	127 227 (227)	128 228 (228)	129 229 (229)	130 230 (230)	131 231 (231)	132 232 (232)	133 233 (233)	134 234 (234)	135 235 (235)	136 236 (236)	137 237 (237)	138 238 (238)	139 239 (239)	140 240 (240)	141 241 (241)	142 242 (242)	143 243 (243)	144 244 (244)	145 245 (245)	146 246 (246)	147 247 (247)	148 248 (248)	149 249 (249)	150 250 (250)	151 251 (251)	152 252 (252)	153 253 (253)	154 254 (254)	155 255 (255)	156 256 (256)	157 257 (257)	158 258 (258)	159 259 (259)	160 260 (260)	161 261 (261)	162 262 (262)	163 263 (263)	164 264 (264)	165 265 (265)	166 266 (266)	167 267 (267)	168 268 (268)	169 269 (269)	170 270 (270)	171 271 (271)	172 272 (272)	173 273 (273)	174 274 (274)	175 275 (275)	176 276 (276)	177 277 (277)	178 278 (278)	179 279 (279)	180 280 (280)	181 281 (281)	182 282 (282)	183 283 (283)	184 284 (284)	185 285 (285)	186 286 (286)	187 287 (287)	188 288 (288)	189 289 (289)	190 290 (290)	191 291 (291)	192 292 (292)	193 293 (293)	194 294 (294)	195 295 (295)	196 296 (296)	197 297 (297)	198 298 (298)	199 299 (299)	200 300 (300)	201 301 (301)	202 302 (302)	203 303 (303)	204 304 (304)	205 305 (305)	206 306 (306)	207 307 (307)	208 308 (308)	209 309 (309)	210 310 (310)	211 311 (311)	212 312 (312)	213 313 (313)	214 314 (314)	215 315 (315)	216 316 (316)	217 317 (317)	218 318 (318)	219 319 (319)	220 320 (320)	221 321 (321)	222 322 (322)	223 323 (323)	224 324 (324)	225 325 (325)	226 326 (326)	227 327 (327)	228 328 (328)	229 329 (329)	230 330 (330)	231 331 (331)	232 332 (332)	233 333 (333)	234 334 (334)	235 335 (335)	236 336 (336)	237 337 (337)	238 338 (338)	239 339 (339)	240 340 (340)	241 341 (341)	242 342 (342)	243 343 (343)	244 344 (344)	245 345 (345)	246 346 (346)	247 347 (347)	248 348 (348)	249 349 (349)	250 350 (350)	251 351 (351)	252 352 (352)	253 353 (353)	254 354 (354)	255 355 (355)	256 356 (356)	257 357 (357)	258 358 (358)	259 359 (359)	260 360 (360)	261 361 (361)	262 362 (362)	263 363 (363)	264 364 (364)	265 365 (365)	266 366 (366)	267 367 (367)	268 368 (368)	269 369 (369)	270 370 (370)	271 371 (371)	272 372 (372)	273 373 (373)	274 374 (374)	275 375 (375)	276 376 (376)	277 377 (377)	278 378 (378)	279 379 (379)	280 380 (380)	281 381 (381)	282 382 (382)	283 383 (383)	284 384 (384)	285 385 (385)	286 386 (386)	287 387 (387)	288 388 (388)	289 389 (389)	290 390 (390)	291 391 (391)	292 392 (392)	293 393 (393)	294 394 (394)	295 395 (395)	296 396 (396)	297 397 (397)	298 398 (398)	299 399 (399)	300 400 (400)	301 401 (401)	302 402 (402)	303 403 (403)	304 404 (404)	305 405 (405)	306 406 (406)	307 407 (407)	308 408 (408)	309 409 (409)	310 410 (410)	311 411 (411)	312 412 (412)	313 413 (413)	314 414 (414)	315 415 (415)	316 416 (416)	317 417 (417)	318 418 (418)	319 419 (419)	320 420 (420)	321 421 (421)	322 422 (422)	323 423 (423)	324 424 (424)	325 425 (425)	326 426 (426)	327 427 (427)	328 428 (428)	329 429 (429)	330 430 (430)	331 431 (431)	332 432 (432)	333 433 (433)	334 434 (434)	335 435 (435)	336 436 (436)	337 437 (437)	338 438 (438)	339 439 (439)	340 440 (440)	341 441 (441)	342 442 (442)	343 443 (443)	344 444 (444)	345 445 (445)	346 446 (446)	347 447 (447)	348 448 (448)	349 449 (449)	350 450 (450)	351 451 (451)	352 452 (452)	353 453 (453)	354 454 (454)	355 455 (455)	356 456 (456)	357 457 (457)	358 458 (458)	359 459 (459)	360 460 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(602)	503 603 (603)	504 604 (604)	505 605 (605)	506 606 (606)	507 607 (607)	508 608 (608)	509 609 (609)	510 610 (610)	511 611 (611)	512 612 (612)	513 613 (613)	514 614 (614)	515 615 (615)	516 616 (616)	517 617 (617)	518 618 (618)	519 619 (619)	520 620 (620)	521 621 (621)	522 622 (622)	523 623 (623)	524 624 (624)	525 625 (625)	526 626 (626)	527 627 (627)	528 628 (628)	529 629 (629)	530 630 (630)	531 631 (631)	532 632 (632)	533 633 (633)	534 634 (634)	535 635 (635)	536 636 (636)	537 637 (637)	538 638 (638)	539 639 (639)	540 640 (640)	541 641 (641)	542 642 (642)	543 643 (643)	544 644 (644)	545 645 (645)	546 646 (646)	547 647 (647)	548 648 (648)	549 649 (649)	550 650 (650)	551 651 (651)	552 652 (652)	553 653 (653)	554 654 (654)	555 655 (655)	556 656 (656)	557 657 (657)	558 658 (658)	559 659 (659)	560 660 (660)	561 661 (661)	562 662 (662)	563 663 (663)	564 664 (664)	565 665 (665)	566 666 (666)	567 667 (667)	568 668 (668)	569 669 (669)	570 670 (670)	571 671 (671)	572 672 (672)	573 673 (673)	574 674 (674)	575 675 (675)	576 676 (676)	577 677 (677)	578 678 (678)	579 679 (679)	580 680 (680)	581 681 (681)	582 682 (682)	583 683 (683)	584 684 (684)	585 685 (685)	586 686 (686)	587 687 (687)	588 688 (688)	589 689 (689)	590 690 (690)	591 691 (691)	592 692 (692)	593 693 (693)	594 694 (694)	595 695 (695)	596 696 (696)	597 697 (697)	598 698 (698)	599 699 (699)	600 700 (700)	601 701

Registry Transmittal Form, SO-229 (Back)

Instructions for Completing Revised Registry Transmittal Form

1a. For New Reporters

*States must complete the following columns:

1. State - FIPS Code
2. Report Number (Report numbers should be assigned in sequence beginning with the lowest number 1)
5. County - FIPS code
8. Auxiliary Code
10. Ownership Code
11. Program Status Code
12. Employment Status Code
13. 1972 SIC Code
14. Name of Establishment
15. Location of Establishment
16. 1972 SIC Based Code assignment
18. Action Code (State should enter code "1" for new reports)
19. Card Code (Preprinted "1")

NOTE: Columns 3, 4, 6, 7, and 9 are blank; column 17 is also blank except for SIC 3731.
Regional Office will provide instructions for use of column 17.

b. For Industry Code, (SIC) or Other Changes (except program status changes)

The State and industry, in the columns specified below, the current establishment identifying information. The columns to be completed are:

- Column 1 - State FIPS Code
- Column 2 - Report Number
- Column 10 - Ownership Code
- Column 14 - Name of Establishment (Optional)
- Column 16 - 1972 SIC Based Code assignment
- Column 18 - Action Code (Enter a "2")
- Column 19 - Card Code (Preprinted "1")

Also complete the columns to be changed.

c. For Program Status Changes

Complete the following columns:

- Column 1 - State FIPS Code
- Column 2 - Report Number
- Column 10 - Ownership Code
- Column 11 - Program Status Code
- Column 14 - Name of Establishment (Optional)
- Column 16 - 1972 SIC on file
- Column 18 - Action Code (Enter a "2")
- Column 19 - Card Code (Preprinted "1")

NOTE: The SIC and Ownership codes must match the corresponding codes on the BLS Registry file in order to make a change to the program status code.

d. For Cancellations

State agencies should complete the following:

- Column 1 - State Code
- Column 2 - Report Number
- Column 10 - Ownership
- Column 11 - Program Status
- Column 14 - Name of Establishment (Optional)
- Column 16 - 1972 SIC on file
- Column 18 - Action Code (State should enter a zero "0")
- Column 19 - Card Code (Preprinted "1")

2. States can transmit requests for industry code changes and other registry changes plus information on new entrants to the survey on the same registry transmittal. It would be easier to process the actions if they were grouped—new reports together, industry changes together, etc.
3. States should forward the original and two copies of this form to the BLS Regional Office listing the required information for each reporter. Reports being resubmitted should be identified by an "R".
4. After the actions have been reviewed, the Regional Office will return to the State one copy of this form.
5. The Regional Office will retain the copy of the form and either forward the original to BLS Washington for processing or will transmit the information via the RTN system.

BLS Annual Report on Employment, Hours and Earnings, SO-234

Review of Labor Statistics
1415 Annual Report on Employment,
Hours, and Earnings

U.S. Department of Labor

[illegible]

BLS Annual Report on Employment, Hours and Earnings-Comment Form, SO-234C

U.S. Department of Labor

Continuation of Unemployment Insurance Report (Form 100-10)
 (Use for reporting unemployment insurance benefits for the month of January 1964)

1. Name of insured: John J. Smith
 2. Social Security Number: 123-45-6789
 3. Date of birth: 01/01/1920
 4. Date of death: 01/01/1964
 5. Date of filing: 01/01/1964
 6. Date of payment: 01/01/1964
 7. Date of receipt: 01/01/1964
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 138. Date of payment: 01/01/1964
 139. Date of receipt: 01/01/1964
 140. Date of payment: 01/01/1964
 14

APPENDIX C

CURRENT EMPLOYMENT STATISTICS MANUAL

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Rev. Oct. 1985

BLS Monthly Report on Employment, Hours and Earnings, SO-235 (Front)

U.S. Department of Labor

Form SO-235 (Rev. 10-85)

Instructions on back

Industry	1985 MONTHLY REPORT ON EMPLOYMENT, HOURS, AND EARNINGS			1984 MONTHLY REPORT ON EMPLOYMENT, HOURS, AND EARNINGS			1983 MONTHLY REPORT ON EMPLOYMENT, HOURS, AND EARNINGS			1982 MONTHLY REPORT ON EMPLOYMENT, HOURS, AND EARNINGS			1981 MONTHLY REPORT ON EMPLOYMENT, HOURS, AND EARNINGS			1980 MONTHLY REPORT ON EMPLOYMENT, HOURS, AND EARNINGS		
	Employment	Hours	Earnings	Employment	Hours	Earnings	Employment	Hours	Earnings	Employment	Hours	Earnings	Employment	Hours	Earnings	Employment	Hours	Earnings
1. Manufacturing and construction	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
2. Wholesale and retail trade	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
3. Finance, insurance, and real estate	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
4. Services	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
5. Government	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
6. Agriculture, forestry, and fishing	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
7. Mining and quarrying	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
8. Transportation and communication	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
9. Health, education, and social services	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
10. Arts, entertainment, and recreation	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
11. Accommodation and food services	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
12. Other services (except government contractors)	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
13. Total nonfarm	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20
14. Total	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20	22	73.20	25.20

Repeat columns 1-21.

BLS Monthly Report on Employment, Hours and Earnings, SO-235
(Back)

Monthly Report on Employment Hours and Earnings - Inactive figures

- 1a. Use this form to submit monthly, quarterly, or employment, hours, and earnings.
- 1b. Use this form to submit annual averages. Report annual averages in current month. Enter "12" on the statement, reference month, and "Annual Averages" on the reference. Annual averages may be reported by year, month, or all data types.
2. Send one copy to RI's Washington office, reference number by the original office. **State of Rhode Island**
Send one copy to the **CES State Operating Manual for mailing address**. Send one copy to the RI's Regional Office. These forms should reach both offices by the business date provided by RI's Washington office. **CES State Operating Manual, Appendix A12**
3. Upon the State's and Area's submission, transmittal date, and the current month to which the data pertain (reference month). Reorder the dates.
4. (Steps the first fiscal year and quarters (3 steps in the form YVOI) and the subsequent year and quarters (3 steps in the form YVOII) on the quarter provided). Also enter the reference State and Area's (see notes on the YVOI and YVOII).
5. Report industry total. Enter in empty title, parenthesis A to list source code and first 4 digits.
6. Annual employment data is entered, handbook, e.g., 14.3. Annual average weekly hours and overtime hours is entered, profile, e.g., 101.3. Annual average data is entered, e.g., 50.7.3.
7. AWT is entered for 2, the total value. It is obtained by multiplying the AWT reported to 1, the total value, by the AWT reported to 2, the total value.
8. Enter comments, if any, on SA 270C.

BLS Monthly Report on Employment, Hours and Earnings-Comment Form, SO-235C

U.S. Department of Labor

Monthly Report on Employment, Hours, and Earnings (Continued)

Instructions: This report is to be filled out by the employer. It should be filled out for each month of the year. The report should be filled out for each month of the year. The report should be filled out for each month of the year.

See instructions on back

Form 1000 (Rev. 1-72)

Block Control, SO-241

Bureau of Labor Statistics
Block Control

U.S. Department of Labor



Requisition Number

Block Number

Number of Schedules

Card Count

Project Name

Project Number

Completion Date and Time

Month	Day	Year	Time:
			a.m.
			p.m.

CURRENT EMPLOYMENT STATISTICS MANUAL

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Transmittal Sheet, SO-242

Bureau of Labor Statistics
Transmittal Sheet
CES Microdata

U.S. Department of Labor



State:	Date of Transmittal:	Transmittal Number:
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This form is required for each transmittal of schedules, schedule substitutes, listings, punch cards, or magnetic tapes.

The transmittals are to be numbered serially beginning with "1" each month.

Both current month and prior months' data may be transmitted under the same SO-242, listed separately and with a separate card count for each group.

Mail to:

BUREAU OF LABOR STATISTICS
Office of Automatic Data Processing Support
GAO Building - Room 2534
Washington, D.C. 20212

Items Transmitted	Date		Count	Date Processing Block No.	Comments
	Month	Year			
Check items transmitted					
Listings ☐					
Schedules ☐					
Schedule substitutes					
Punch cards					
Magnetic tapes					
Total					

Inventory and Requisition of Standard Forms for the BLS 790 Program, SO-246

Bureau of Labor Statistics
Semiannual Inventory and Requisition of
Standard Forms for the BLS 790 Program

U.S. Department of Labor



State _____ Date _____

*This form should be prepared in duplicate. The original should be forwarded to your BLS regional office.
Retain the second copy for your files.*

Form Number	Stock Number	Description	Number On Hand	Number Requisitioned
SO-220	11-134	Historical Record of Multistate Construction Firms		
SO-221	11-148	Benchmark Control Card—Sample Expansion		
SO-228	11-1494	Correction/Schedule Substitute Form		
SO-227	11-133	Office Record Card		
SO-228	11-1495	Transcript for Contract Construction Firms		
SO-229	11-139	Registry Transaction Form		
SO-230	11-140	New Report		
SO-231	11-1503	Industry Change		
SO-232	11-1502	Change in Report Numbers		
SO-233	11-1505	Report on Employment		
SO-234	11-1493	Report on Hours and Earnings		
SO-235	11-1500	Monthly Report on Employment Hours and Earnings		
SO-241	11-1501	Block Control		
SO-242	11-1499	Transmittal Sheet		
BLS-2120-A	11-50	Punch Card		
BLS 790K		Delinquency Post Card ¹		
BLS 790L		Delinquency Post Card ¹		
BLS 790M		Delinquency Post Card ¹		
BLS 790N		Delinquency Post Card (pin feed) ²		
BLS 790O		Delinquency Post Card (pin feed) ²		
BLS 790P		Delinquency Post Card (pin feed) ²		
		Window Envelopes ²		
		Return Envelopes ²		
		Envelopes, Other ^{2,3}		
		Envelopes, Other ^{2,3}		

¹Enclose 2 copies of each kind ordered and allow 10 weeks for delivery.²Enclose 4 copies of each kind ordered and allow 90 days for delivery.³Specify use of envelope _____Signed _____
(BLS Cooperating Representative)

NOTE: This report form does not cover the BLS 790 series schedules and supplements. The initial request for these forms is submitted on the annual schedule order form. Inverse requests for additional schedules or supplements should be made by memorandum to the BLS Regional Office.

APPENDIX C

Page 21
Rev. Oct. 1985

CURRENT EMPLOYMENT STATISTICS MANUAL

Employment, Payroll and Hours -- Flagslip, SO-266

(COMPUTER GENERATED)

EMPLOYMENT, PAYROLL AND HOURS FLAGSLIP

Bureau of Labor Statistics
Division of Monthly Industry
Employment Statistics
GAO Building rm 2080
441 G Street NW
Washington, D.C. 20212

contact at BLS-Washington:
(analyst's name)
(202) 523-0000
09/09/85

(name of establishment)

STATE
REPORT NO.
INDUSTRY 8062

DATE	AE	WW	PW	PR	MH	OTMH	EXPL	C	AHE	AWH	AOT
0885											
0785											
0685											
0585											
0385											
0285											
0185											
1284											
1184											
1084											
0984											
0884											
0784											
0684											
0584											

(DATA ENTERED HERE)

Data entered on this form appear questionable.
Enter corrections or explanations on this form.

STATE COMMENTS:

PLEASE RETURN PROMPTLY
SO-266 (Rev. January 1981)

DATE RETURNED:

CURRENT EMPLOYMENT STATISTICS MANUAL

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790 State Benchmark Information -- March 198_, SO-270

Bureau of Labor Statistics
790 State Benchmark
Information--March 1982

U.S. Department of Labor

To: BLS-790 Benchmark Section

Thru: _____ BLS Regional Director

From: _____ State of _____

Subject: Presumed Noncovered Employment in State in March 1982

Listed below are the presumed noncovered employment counts used in developing the 1982 State benchmarks:

Titles	SIC	Employment
1. Class I railroad transportation	4011 pt.	
2. Other railroads and switching and terminal companies	4011 pt., 4013	
3. Railroad car loan companies	479 pt.	
4. Nonoffice insurance salespersons	63 pt.	
5. Commissioned real estate salespersons	653, 655 pt.	
6. Religious trusts	6732	
7. Interns and trainees except student nurses	806 pt.	
8. Noncovered teachers of parochial elementary and secondary schools	821 pt.	
9. Working students and working spouses of students on college payrolls	822 pt.	
10. Sheltered workshops	833 pt.	
11. Religious child day care services	835 pt.	
12. Churches and other religious organizations	866	
13. Noncovered employees of nonprofit organizations having less than four (4) employees	83 pt., 86 pt.	
14. Working students and working spouses on State college payrolls	822 pt. (ownership code 2)	
15. Interns and trainees of State hospitals	806 pt. (ownership code 2)	
16. Elected officials of State governments	91-96 (ownership code 2)	
17. Working students and spouses on payrolls of local higher education institutions	822 pt. (ownership code 3)	
18. Interns and trainees of local hospitals	806 pt. (ownership code 3)	
19. Elected officials, paid volunteer fire fighters, etc. of local government jurisdictions	91-96 (ownership code 3)	
20. Other noncovered		

Comments

Region should return form to:
 U.S. Department of Labor
 Bureau of Labor Statistics
 Office of Employment Structure and Trends
 Attn: BLS-790 Benchmark Section
 Room 2089 -- GAO Building
 441 G Street, N.W.
 Washington, D.C. 20212

CC: Regional Office
 State Office

SO-270 (Rev. Aug. 1982)

APPENDIX C

Punch Card, BLS 2120A

[illegible]

Delinquency Postcard, BLS 790K

U.S. Department of Labor



Bureau of Labor Statistics



Postage and Fees Paid
U.S. Department of Labor
LAB 441

Official Business
Penalty for Private Use, \$300

Form Approved
O.M.B. No. 1220-0011

U.S. Department of Labor
Bureau of Labor Statistics
Washington, D.C. 20212

(Mail to the above address)

Your BLS Report on Employment, Payroll and Hours with information for the month of _____ has not reached us.

If you have not yet mailed this form, will you send it to the address shown in the upper right corner so that our monthly summary will be as comprehensive as possible? If the form has not reached you, please request a duplicate.

Please ignore this reminder if your report is already in the mail.
BLS 790K (Rev. May 1977)

Delinquency Postcard, BLS 790L

Form Approved
O M B No 1220-0011

in cooperation with
U.S. Department of Labor
Bureau of Labor Statistics

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Agenda

8:00

8:30 Mail BLS Report on Employment,
Payroll and Hours to State Office

9:00

9:30

10:00

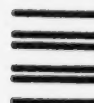
10:30

Please ignore this card if you have
already mailed your report.

BLS 790L (Rev May 1977)

U.S. Department of Labor

Bureau of Labor Statistics



Official Business
Penalty for Private Use, \$300

Postage and Fees Paid
U.S. Department of Labor
LAB 441



Delinquency Postcard, BLS 790M

U.S. Department of Labor



Bureau of Labor Statistics



Postage and Fees Paid
U.S. Department of Labor
LAB 441

Official Business
Penalty for Private Use, \$300

Form Approved
O.M.B. No. 1220-0011

U.S. Department of Labor
Bureau of Labor Statistics
Washington, D.C. 20212

(Mail to the above address)

Your BLS Report on Employment, Payroll and Hours with information for last month has not reached us.

If you have not yet mailed this form, will you send it to the address shown in the upper right corner so that our monthly summary will be as comprehensive as possible? If the form has not reached you, please request a duplicate.

Please ignore this reminder if your report is already in the mail.

BLS 790M (Rev. May 1977)

Delinquency Postcard, BLS 790N (pinfeed)

U.S. Department of Labor



Bureau of Labor Statistics



Postage and Fees Paid
U.S. Department of Labor
LAB 441

Official Business
Penalty for Private Use, \$300

Your **REPORT ON EMPLOY-
MENT, PAYROLL, AND HOURS,
FORM BLS 790**, with information
for the months of

_____ has not reached us.

Form Approved
O.M.B. No. 1220-0011

Address correspondence to:

U.S. Department of Labor
Bureau of Labor Statistics
Washington, D.C. 20212

PLEASE DISREGARD THIS NOTICE IF YOUR REPORT HAS BEEN SUBMITTED.

Your report form, BLS 790, has not been received for the months listed on the other side of this card.

If you have not yet mailed the form, please send it promptly to the address shown in the upper right hand corner.

If the form has not reached you, please request a duplicate.

The information is needed to help assure comprehensive and up-to-date labor economic data. We will be glad to mail you a copy of our Monthly Publication on request.

BLS 790N (Rev. June 1982)

CURRENT EMPLOYMENT STATISTICS MANUAL

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Delinquency Postcard, BLS 7900 (pinfeed)

Form Approved
O.M.B. No. 1220-0011

in cooperation with
U.S. Department of Labor
Bureau of Labor Statistics

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Agenda

8:00

8:30 *Mail BLS Report on Employment, Payroll and Hours to State Office*

9:00

9:30

10:00

10:30

Please ignore this card if you have
already mailed your report.

BLS 7900 (Rev. May 1977)

U.S. Department of Labor
Bureau of Labor Statistics

Official Business
Penalty for Private Use, \$300

Postage and Fees Paid
U.S. Department of Labor
LAB 441



CURRENT EMPLOYMENT STATISTICS MANUAL

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Delinquency Postcard, BLS 790P (pinfeed)

U.S. Department of Labor

Bureau of Labor Statistics

Official Business
Penalty for Private Use, \$300



Postage and Fees Paid
U.S. Department of Labor
LAB 441

Form Approved
O.M.B. No. 1220-0011

U.S. Department of Labor
Bureau of Labor Statistics
Washington, D.C. 20212

(Mail to the above address)

Your BLS Report on Employment, Payroll and Hours with information for last month has not reached us.

If you have not yet mailed this form, will you send it to the address shown in the upper right corner so that our monthly summary will be as comprehensive as possible? If the form has not reached you, please request a duplicate.

Please ignore this reminder if your report is already in the mail.

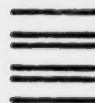
BLS 790P (Rev. June 1982)

CES Return Envelope

U.S. Department of Labor

Bureau of Labor Statistics
Washington, D.C. 20212

Official Business
Penalty for Private Use, \$300



Postage and Fees Paid
U S Department of Labor
Lab 441

CES Mailout Envelope

U.S. Department of Labor

Bureau of Labor Statistics
Washington, D.C. 20212

Official Business
Penalty for Private Use, \$300



Postage and Fees Paid
U.S. Department of Labor
Lab 441

APPENDIX D: FIRMS WITH SPECIAL REPORTING ARRANGEMENTS

TABLE OF CONTENTS

- D.1 CES National Reporters
- D.2 CES Reporters with Special Arrangements
- D.3 CES Multistate Construction Reporters
- D.4 Mailing List for Multistate Construction Transcript Forms (SO-228)
- D.5 National Key Reporters in the CES Survey

Appendix D.1: CES NATIONAL REPORTERS

CONFIDENTIAL

Manual Reference: Section 6.5.5

Eight firms comprise the "National Reporters" which have negotiated with BLS to send reports for all or some of their establishments directly to BLS-Washington. These reporters are large firms with operations in many States whose data significantly affect the economic environment. Two establishments, AETNA and J.C. PENNEY, report their data monthly for all locations on a one-page computer printout. All other establishments record their data on a BLS 790 schedule which is mailed to them annually by BLS-Washington. BLS-Washington edits all reports for these firms and forwards the data on photocopies directly to each State involved.

BLS-Washington enters National Reporter microdata directly to the National Employment and Earnings System. Do not contact any of these firms directly; route all communications to these National Reporters to the BLS-Washington office.

Do not make changes to the National Registry for these National Reporters without first advising your BLS Regional office in writing; otherwise BLS-Washington, as the data collecting agent, will not know to reflect these changes on the collection schedules, and "nonmatches" or misdirected mailings will occur.

The photocopies of schedules which are mailed to the States should be RETAINED in the State office. The State Agencies MUST NOT MAIL these photocopies to any of the National Reporter companies.

For information regarding data, delinquency, or solicitation of new units, contact:

U.S. Department of Labor
Bureau of Labor Statistics
441 G Street, N.W. - Mail Code 3
Washington, DC 20212

or call Jim Yule or Janet Joice - (202) 523-1460. We strongly recommend that all States carry this address on their files as the contact instead of the company address.

J.C. PENNEY COMPANY INC.
Salt Lake City, Utah**CONFIDENTIAL**

Major Industrial Classifications: SIC 5311

J.C. Penney Company transmits data directly to BLS-Washington on a printout. The data reported include all employees only. The data are transcribed to BLS 790 E schedules and photocopies of these schedules are forwarded to the States. States can expect to receive the data approximately 2 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by State.

UNITED STATES STEEL CORPORATION
Pittsburgh, Pennsylvania

Major Industrial Classifications: Quarries and Manufacturing plants: -SIC 1211, 1422, 3312, 3533 and 3483.

Divisions Reported:

- American Steel and Wire Div. (of N.J.)
- American-Virginia Bridge Div.
- Consolidated-Western Steel Div.
- Cyclone Fence Div. (of American Steel and Wire Div.)
- Gerrard Steel Strapping Div.
- Michigan Limestone Div.
- National Tube Div.
- Oil Well Supply Div.

United States Steel Corporation transmits data to BLS-Washington on BLS 790 A and BLS 790 C schedules. The data reported include all employees, women workers, production workers, payroll, hours and overtime hours for the manufacturing plants (BLS 790 C); and all employees, women workers, production workers, payroll and hours for the quarries (BLS 790 A). States can expect to receive the data approximately 2 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by establishment by city in selected States.

UNITED STATES STEEL SUPPLY (Division of United States Steel Corp)
Pittsburgh, Pennsylvania

Major Industrial Classifications: SIC 5051

United States Steel Supply transmits data to BLS Washington on BLS 790 E schedules. The data reported include all employees, women workers, nonsupervisory employees, payroll and hours. States can expect to receive the data approximately 2 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by establishment by city within certain States.

AETNA LIFE INSURANCE COMPANY 1/
Hartford, Connecticut**CONFIDENTIAL**

Major Industrial Classification: SIC 6311

Aetna Life Insurance Company transmits data directly to BLS Washington on a printout. The data reported include all employees, women workers, nonsupervisory employees, payroll and hours. The data are transcribed to BLS 790 F schedules and photocopies of these schedules are forwarded to the States. States can expect to receive the data approximately 2 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by State.

ALUMINUM COMPANY OF AMERICA (ALCOA)
Pittsburgh, PennsylvaniaMajor Industrial Classifications: SIC 2819, 3334, 3353, 3354,
3355, 3452, 3463, 3466 and 3599.

Aluminum Company of America transmits data directly to BLS-Washington on BLS 790 C schedules. The data reported include all employees, women workers, production workers, payroll, hours and overtime hours. States can expect to receive the data approximately 2 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by city within the State.

METROPOLITAN LIFE INSURANCE COMPANY
New York, New York

Major Industrial Classification: SIC 6311

Metropolitan Life Insurance Company transmits data to BLS-Washington on BLS 790 F schedules. The data reported include all employees, women workers, nonsupervisory employees, payroll and hours. States can expect to receive the data approximately 2 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by city within each State.

1/ Not connected with AETNA Insurance Co.
690 Main St., Hartford, Connecticut

WESTERN UNION TELEGRAPH COMPANY

Upper Saddle River, New Jersey

CONFIDENTIAL

Major Industrial Classification: - SIC 4821

Western Union provides data monthly to BLS-Washington via telephone. The data are transcribed to a BLS 790 D schedule. The data reported include all employees and women workers only. The employment counts are forwarded by BLS-Washington to all States and Regional offices on an SO-17 form. Western Union currently is unable to report nonsupervisory employment, payroll, or hours data. The States can expect to receive the data approximately 3 weeks following the end of the reference month. The level of geographic detail is for U.S. totals only.

WESTINGHOUSE ELECTRIC CORPORATION

Pittsburgh, Pennsylvania

Major Industrial Classifications: Manufacturing, trade and services.

Westinghouse Electric Corp. transmits data to BLS-Washington on BLS 790 C schedules for the manufacturing operations, BLS 790 E schedules for the trade operations, and BLS 790 G schedules for services. The data reported include all employees, nonsupervisory employees, payroll, and hours for trade and services. The data reported for manufacturing operations include all employees, production workers, payroll, hours and overtime hours.

States can expect to receive the data approximately 2 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by establishment by city within each State.

CONFIDENTIAL

APPENDIX D.2

CURRENT EMPLOYMENT STATISTICS MANUAL

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APPENDIX D.2 CES REPORTERS WITH SPECIAL ARRANGEMENTS Manual Reference: Section 6.5.5

ALLSTATE INSURANCE COMPANY Northbrook, Illinois 60062

Major Industrial Classification: SIC 6331

ALLSTATE INSURANCE COMPANY transmits data directly to the Chicago Regional Office on a computer printout. The Chicago Regional Office forwards the data on printouts to all of the State agencies. Data reported include the complete line of CES employment, payroll and hours data for each State in the United States. States should receive the data approximately 3 weeks after the reference week which includes the 12th of the month. The level of geographic detail is by State and by county.

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

BURROUGHS CORPORATION

BURROUGHS has four (4) payroll centers from which the CES data for employment, payroll, and hours are dispersed. These payroll centers are in California, Georgia, Michigan, and New Jersey. (Do not contact the company directly.)

Major Industrial Classification: Wholesale Trade --
Durable Goods-SIC 5011

The data which BURROUGHS distributes to the Regions and State Agencies include the complete line of CES employment, payroll and hour data for wholesale trade operations on a State-by-establishment basis. The manufacturing operations are reported directly to each State via normal reporting procedures. The States should receive the wholesale trade data approximately three (3) weeks after the reference week. The level of geographic detail is by the actual establishment location within each State.

The Atlanta Regional Office collects data from the BURROUGHS Georgia Payroll Center for fourteen (14) States and distributes on computer listings to:

Alabama	Georgia	Mississippi	Oklahoma	Texas (part)
Arkansas	Kansas	Missouri	South Carolina	Virginia
Florida	Louisiana	North Carolina	Tennessee	

CONFIDENTIAL

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A "home office" report is also received in the Atlanta Regional Office. This report covers operations in Atlanta and Dallas. These data are not included in the Georgia and Texas reports and must be separated by ratios. The Atlanta Regional Office provides these data to Georgia and Texas; the States must apply this factor to the data. The ratios developed for employment and payroll are:

Atlanta - .79061
Dallas - .2039

For information regarding data, delinquency, or solicitation of new units, contact:

Atlanta Regional Office
Allan Ballard 8 (404) 257-4421

The California State Agency collects data from the BURROUGHS Western Payroll Center and distributes on computer listings to the following States:

<u>Chicago R.O.</u>	<u>Dallas R.O.</u>	<u>Kansas City R.O.</u>	<u>San Francisco R.O.</u>
Minnesota	New Mexico	Colorado	Alaska
Wisconsin (part)	Texas (part)	Iowa	Arizona
		Montana	California
		Nebraska	Hawaii
		North Dakota	Idaho
		South Dakota	Nevada
		Utah	Oregon
		Wyoming	Washington

For information regarding data, delinquency, or solicitation of new units, contact:

California State Employment Security Agency
Bob McGouldrick 8 (916) 322-6571

The Chicago Regional Office collects data from the BURROUGHS Michigan Payroll Center and distributes these computer listings to:

Illinois	Kentucky	Ohio
Indiana	Michigan	Wisconsin (part)

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

The BURROUGHS New Jersey Payroll Center distributes the employment and payroll data on computer printouts directly to Maryland and West Virginia. For information regarding data, delinquency, or solicitation of new units, contact:

Philadelphia Regional Office
Mary Anne Phillips 8 (215) 596-1159

CHEVRON (Standard Oil of California)
San Francisco, California
(Do not contact company directly.)

CONFIDENTIAL

Major Industrial Classifications: SIC 1311 and 2911
(Many minor classifications)

CHEVRON transmits data directly to the California cooperating State Agency on a monthly basis (which is the complete CES information line for all CHEVRON establishments in the United States and Puerto Rico). The data are sent from California to the cooperating agencies. Data reported include the complete line of CES employment, payroll and hours for every State in the United States. States should receive the data at the end of the following reference month. The level of geographic detail includes all counties within each state.

For information regarding data, delinquency, or solicitation of new units, contact:

California State Agency
Bob McGouldrick 8 (916) 322-6571

THE CORPS OF ENGINEERS
Omaha, Nebraska

Major Industrial Classification: SIC 9711

The Corps of Engineers (from its Central Payroll Data Bank in Omaha) transmits data on computer lists directly to each cooperating State agency. The data reported are monthly counts of the Corps total civilian and women worker employees within each State. The Corps also sends to the State agencies the quarterly civilian payroll figure as part of their listing in March, June, September and December.

The employment counts are end-of-month reference figures and not those figures for the pay period which includes the 12th of the month.

The Corps of Engineers provides counts of all of its civilian employees at each location. This scheme of reporting is unlike the rest of Defense Department's reporting where counts are transmitted only for locations having 101 or more civilian employees.

The data are transmitted under the GSA location identification code (and not under the FIPS structured coding system). The GSA codes are obtained from the GSA publication - WORLDWIDE GEOGRAPHIC LOCATION CODES -- FEBRUARY 1972.

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If the cooperating State agency that collects the Corps' information is not the Employment Security agency, the cooperating agency must provide the ES agency with the information within a month after the end of each quarter. This can be done using BLS 790 J-FD schedules, machine listings or punched cards.

After the survey reference month. The level of geographic detail is by area.

For information regarding data, delinquency, or solicitation of new units the States should contact:

Central Payroll Northern Area
U.S. Army Corps of Engineers
P.O. Box 1439 - Downtown Station
Omaha, Nebraska 68101
Mr. Lee Williamson, Chief
(402) 221-3959

ENDICOTT-JOHNSON CORP

1111 East Main
Endicott, New York 13760

Major Industrial Classifications: SIC 5661 & 5139

ENDICOTT-JOHNSON CORP transmits data on machine sheets directly to each cooperating State Agency for retail stores operating under the name of the parent corporation and the following divisions and subsidiaries:

Divisions

Walter L. Johnson
Liberty Shoe Stores
A.E. Nettleton Co.

Subsidiaries

Father & Son Shoe Stores Inc (Slater Boot Co.)
Liberty Safety Shoes
Merit Shoe Stores Inc
Nobil Shoe
Nosco Shoes
Trent Shoe
Trim Foot

The data reported include nonsupervisory employees, women, payroll and hours. The reports are for the 7-day period which includes the 12th of the month. States can expect to receive the data two weeks after the survey reference week.

Manufacturing and wholesale operations of the company and its subsidiaries report to the State Agencies on BLS 790 C and 790 E, respectively, under standard BLS procedures.

For information regarding data, delinquency, or solicitation of new units contact:

New York Regional Office
Jo Figueroa 8 (212) 265-3113

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FORD MOTOR COMPANY

American Road
Dearborn, Michigan 48121

Major Industrial Classifications: SIC 2396, 2851, 3211, 3312, 3321, 3361, 3462, 3465, 3519, 3523, 3544, 3592, 3694, 3711, 3714, 5013, and 5083.

FORD MOTOR COMPANY transmits data, on interpreted punched cards (BLS-2120A), to the Michigan State Agency and to BLS-Washington. The Michigan Agency sends the individual cards to the States monthly. Data reported include the complete line of CES employment, payroll and hours for all Ford establishments (except the Philco Division) throughout the country. The data reported in the last column of the punched cards are Overtime Pay. This is not a commission figure. The Overtime Pay is also reflected in the Total Payroll Column. States should receive the data 2 weeks after the reference week. The level of geographic detail is by establishment.

The States should not send monthly BLS 790 data collection schedules to Ford plants in their States.

Although BLS-Washington receives the punched cards directly from Ford and enters the data into the national file, State Agencies still should include the Ford data in their monthly microdata transmittals for the closing.

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

GENERAL MOTORS CORPORATION

Wage Administration Section
Room 13 - 218 General Motors Building
3044 West Gravel Boulevard
Detroit, Michigan 48202

Major Industrial Classifications: SIC 3357, 3651, 3694, 3711, 3713, and 3714 (There are many other minor classifications). The major industrial classification for General Motors Acceptance Corp is SIC 6146.

CONFIDENTIAL

APPENDIX D.2

CURRENT EMPLOYMENT STATISTICS MANUAL

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GENERAL MOTORS CORPORATION transmits data directly to the cooperating State Agencies on BLS 790 C schedules each month. The data reported are the complete line of CES employment, payroll and hours for each sampled manufacturing operation. States can expect to receive the data approximately one week after the reference week which includes the 12th of the month. The level of geographic detail is by establishment.

Requests for reports for establishments of the GENERAL MOTORS ACCEPTANCE CORPORATION (subsidiary of General Motors Corporation) should be addressed as follows:

Personnel Director
General Motors Acceptance Corporation
General Motors Building
1775 Broadway
New York, New York 10019

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

GREAT ATLANTIC AND PACIFIC TEA COMPANY, INCORPORATED Montvale, New Jersey

Major Industrial Classification: SIC 5411

GREAT ATLANTIC AND PACIFIC TEA CO, INC. transmits data, which have been collected from the various payroll offices, directly to the cooperating State Agencies on BLS 790 schedules each month. The data reported include the complete line of CES employment, payroll, and hours. States can expect to receive the data approximately two weeks after the reference week which includes the 12th of the month. The level of geographic detail is by establishment within various States.

For information regarding data, delinquency, or solicitation of new units, contact:

New York Regional Office
Jo Figueroa 8 (212) 265-3113

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ITT (INTERNATIONAL TELEPHONE AND TELEGRAPH) GRINNELL CORPORATION (Do not contact company directly.)

Major Industrial Classification: SIC 5074

ITT's Finance Center in Philadelphia, Pennsylvania, sends data on computer listings to the California Employment Data and Research Division in Sacramento, California. California mails a xeroxed copy of the company submittal to the State Agencies. Reported data include All Employees (AE), Women Workers (WW), Production Workers (PW), Payroll (PR), and Hours (WH) for Montana, California, Arizona, Oregon, Colorado and Washington. States can expect to receive data by the end of the currently reported month. The level of geographic detail is State only.

For information regarding data, delinquency, and solicitation of new units, contact:

California State Agency
Bob McGouldrick 8 (916) 322-6571

K - MART CORPORATION Troy, Michigan 48084

Major Industrial Classifications: SIC 5311 and 5331

K - MART CORPORATION provides data to the Chicago Regional Office which forwards the data to the State Agencies on a computer printout. The data reported include nonsupervisory workers, women workers, payroll and hours. States should receive the data approximately 3 weeks after the reference week. The level of geographic detail is by establishment.

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

LUCKY STORES, INC. (Do not contact company directly)

Major industrial Classification: SIC 5311

LUCKY STORES, INC. submits data directly to the California State Agency in Sacramento, California. Xerox copies are made of the company submittal and forwarded to the following 4 States:

Arizona
California

Nevada
Texas

CONFIDENTIAL

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CURRENT EMPLOYMENT STATISTICS MANUAL

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The data reported include the CES employment (all employees only), women workers, payroll and hours.

Lucky Stores reports separately the commission pay for the nonsupervisory workers.

States should receive the data the first week of the month following the reference month. The level of geographic detail includes the county within the States.

For information regarding data, delinquency, or solicitation of new units, contact:

San Francisco Regional Office
Joyce Sakai 8 (415) 556-6857

MONTGOMERY WARD & CO., INC.
535 West Chicago Avenue
Chicago Illinois 60610

Major Industrial Classifications - SIC 5311 and 5961

MONTGOMERY WARD & CO., INC. has 4 Regional Office Payroll Centers (Baltimore, Chicago, Kansas City and Oakland). The BLS Regional Offices collect data, monthly, from Montgomery Wards Regional Payroll Centers and forward the data to the State Agencies.

The Chicago Regional Office collects data from Montgomery Ward's Chicago Regional Payroll Records. The data reported include employment, payroll and hours for department stores and mail order houses. Data for the department stores are collected for the following states:

Illinois	Michigan	Nebraska	Wisconsin
Indiana	Minnesota	North Dakota	
Iowa	Montana	Ohio	

Data for the mail order houses are collected for the following states:

California	Minnesota	Ohio
Maryland	Missouri	Texas

Chicago uses a BLS 790 E schedule to transmit data to the States for mail order houses and a hand written work sheet for the department stores. States can expect to receive the data one week after the reference week. The level of geographic detail is by establishment.

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CURRENT EMPLOYMENT STATISTICS MANUAL

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For information regarding data, delinquency, or solicitation of new units contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

The Kansas City Regional Office collects data from Montgomery Ward's Payroll Center in Kansas City. The data reported include all employees only for department stores and mail order houses. The data are forwarded to the following states on BLS 790 E schedules:

Alabama	Kansas	Missouri	Texas
Colorado	Louisiana	Oklahoma	Wyoming

The States can expect to receive the data approximately one week after the reference week. The level of geographic detail is by establishment.

For information regarding data, delinquency, or solicitation of new units contact:

Kansas City Regional Office
Donna Heckart 8 (816) 758-2483

The Philadelphia Regional Office collects data from Montgomery Ward's Baltimore Payroll Center. The data reported include all employees and nonsupervisory employees only for department stores. The data is forwarded to the following States on BLS 790 E schedules:

Kentucky (part)	Pennsylvania
New Hampshire	South Carolina
New York	Virginia
North Carolina	West Virginia

The States can expect to receive the data approximately the last week of the month. The level of geographic detail is by establishment location.

For information regarding data, delinquency, or solicitation of new units contact:

Philadelphia Regional Office
Mary Anne Phillips 8 (215) 596-1159

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SEARS ROEBUCK AND COMPANY

Sears Tower
Chicago, Illinois 60606
(Do not contact company directly.)

Major Industrial Classification: SIC 5311 and 5961

SEARS ROEBUCK AND COMPANY has four (4) Payroll Centers located in Atlanta, Columbus (Ohio), Los Angeles and Philadelphia. These Payroll Centers transmit the monthly computer printouts for employment, payroll, and hours data to the respective Atlanta, Chicago, San Francisco and Philadelphia Regional Offices. The Regional Offices forward the data on printouts to the State Agencies. The data reported include the all employees, women workers, nonsupervisory workers, payroll and hours. States should receive the data two weeks after the reference week which includes the 12th of the month. The level of geographic detail is by establishment.

The Atlanta Regional Office collects data for the following States:

Alabama	Kentucky (part)	North Carolina (part)	Texas (part)
Arkansas	Louisiana	Oklahoma	Virginia (part)
Florida	Mississippi	South Carolina (part)	
Georgia	Missouri	Tennessee	

For information regarding data, delinquency, or solicitation of new units, contact:

Atlanta Regional Office
Allan Ballard 8 257-4421

The Chicago Regional Office collects data for the following States:

Illinois	Kentucky (part)	Nebraska	Wisconsin
Indiana	Michigan	North Dakota	
Iowa	Minnesota	Ohio (part)	
Kansas	Missouri	South Dakota	

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

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The Philadelphia Regional Office collects data for the following States:

Connecticut	Massachusetts	Pennsylvania
District of Columbia	New Hampshire	Rhode Island
Delaware	New Jersey	South Carolina
Kentucky (part)	New York	Vermont
Maine	North Carolina (part)	Virginia (part)
Maryland	Ohio (part)	West Virginia

For information regarding data, delinquency, or solicitation of new units, contact:

Philadelphia Regional Office
Mary Anne Phillips 8 (215) 596-1159

The San Francisco Regional Office collects data for the following States:

Alaska	Hawaii	New Mexico	Utah
Arizona	Idaho	Oregon	Washington
California	Montana	Texas (part)	Wyoming
Colorado	Nevada		

For information regarding data, delinquency, or solicitation of new units contact:

San Francisco Regional Office
Bobbi Oshima 8 (415) 556-6857

SHELL OIL COMPANY

Personnel Reports
Post Office Box 20329
Houston, Texas 77025

Major Industrial Classifications: SIC 1311, 1321, 2822, 2869, 2911, 4612, 4613, 5161, 5171, 5172, 5191 and 7391.

SHELL OIL COMPANY transmits data directly to each cooperating State Agency on computer printouts. The data reported include the complete line of CES employment, payroll, hours, and overtime hours.

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Shell provides data for the following company names:

- Pecten Chemical Products
- Pecten International Company
- Shell California Production Inc.
- Shell Mining Company
- Shell Offshore Inc.
- Shell Oil Company - Marketing
- Shell Oil Company - Staff and Operating
- Shell Pipeline Company
- Shell - Western Exploration and Production

The States should receive the data approximately 10 days following the end of the reference month.

The level of geographic detail is by State, by county, by SIC, by establishment, and by pay center.

For information regarding data, delinquency, or solicitation of new units, contact:

Dallas Regional Office
Fran Benjamin 8 (214) 767-6966

TEKTRONIX, INC.

Beaverton, Oregon

Major Industrial Classifications: SIC 3573, 5063, and 3825
(Major SIC for Oregon)

TEKTRONIX, INC provides the Oregon CES Agency with a monthly computer printout of employment statistics by site. Data reported include the complete line of CES employment, payroll and hours data. Each computer printout covers a 4-week Accounting Period broken down into two 2-week pay periods. An L/P code should be assigned to the 2-week pay period which includes the 12th of the month. The other 2-week pay period should be ignored.

The new reporting format for each site contains 4 parts:

- Production
- Nonproduction Management
- Nonproduction Nonmanagement
- Site Total

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The type of activity conducted in each State will determine how the new format should be used. Where the major activity is production (e.g. Washington) do the following:

1. Use the "Site Total" section for All Employees and Women
2. Use the "Production" section for Production Worker Number
3. Use the "BLS Subtotal" line of the "Production" section for Production Worker Payroll and Production Worker Hours
4. Use the "Overtime" line of the "Production" section for Overtime Hours.

Where the major activity is sales and service (most other States) do the following:

1. Use the "Site Total" section for All Employees and Women
2. Use the "Nonproduction Nonmanagement" section for Non-supervisory Employee Number
3. Use the "BLS Subtotal" line of the "Nonproduction Nonmanagement" section for the Nonsupervisory Employee Payroll and Nonsupervisory Employee Hours.

States should receive their data by the 2nd closing. The level of geographic detail is by site within the State.

For information regarding data, delinquency, or solicitation of new units, contact:

BLS Cooperating Representative
State of Oregon Employment Division
Department of Human Resources
875 Union Street, N.E.
Salem, Oregon 97311
8 (503) 378-8658

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THE 3 - M CORPORATION (Minnesota Mining and Manufacturing)
Hudson Road
St. Paul, Minnesota 55144

Major Industrial Classification: SIC 2641

THE 3 - M CORPORATION provides data to the Minnesota Department of Economic Security which forwards the data to State Agencies on computer printouts. The data reported include the complete line of CES employment payroll, and hours for all operations in the CES survey should receive the data approximately 3 weeks after the reference week. The level of geographic detail is by State - by establishment.

All contacts concerning reporting of 3-M should be made to the Minnesota State Agency through the Chicago Regional Office.

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

TRAVELERS INSURANCE COMPANY
One Tower Square
Hartford, Connecticut 06115

Major Industrial Classification: SIC 6311

TRAVELERS INSURANCE COMPANY transmits data for two (2) nationwide reports to the Connecticut State Agency on BLS 790 F schedules. One report (65-2-6311) includes employment, payroll, and hours data for nonsupervisory staff including clerical workers. The other report (65-10-6311) covers the all employee data for the supervisory staff.

The Connecticut State Agency forwards the two (2) reports to BLS-Washington. The level of geographic detail is U.S. all employee data. Travelers is unable to break out their data on an individual State basis.

The Connecticut State Agency also collects data from the Hartford, Connecticut, location covering the Home Office only.

For information regarding data, delinquency, or solicitation of new units, contact:

Boston Regional Office
William A. Ferson 8 (617) 223-6797

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UNITED STATES DEPARTMENT OF DEFENSE Washington, D.C.

Major Industrial Classification: SIC 9711

The Departments of the Army, Navy, and the Air Force transmit data directly to each cooperating State Agency on BLS 790 J-FD schedules. The data reported are the total number of full-time and part-time civilian employees and women only for monthly transmittals. The employment counts are end-of-month reference figures and not those figures for the pay period which includes the 12th of the month. The total civilian payroll figure is reported quarterly. The employment and payroll data are confined to the larger Defense Department installations of 101 or more employees. When employment at an installation drops below 101, the installation remains in the sample only until the end of the quarter.

The Departments of the Army, Navy, and Air Force have each informed their installations that they may cooperate directly with State agencies. The State Agency, when soliciting an installation for civilian employment data, should cite the special regulation issued by the particular Department involved. For the Department of the Army the citation should be as follows:

Army Regulations No. 600-335, issued 12 January 1966
"Personnel-General -- Employment and Earnings by
Installation"
Reports Control Symbol Labor 1007

For the Department of the Navy, instruction OIR-notice 12220, August 19, 1955, informed all Navy installations of this reporting program. All commands of the Air Force were instructed of this reporting program in AF-R1.

Defense installations not falling under the Departments of the Army, Navy, and Air Force have been instructed to report similarly.

States can expect to receive the data approximately 2 weeks after the reference month. The level of geographic detail is by installation by State.

When the cooperating State agency that collects the information is not the Employment Security agency, the cooperating agency must provide the ES agency with the information within a month after the end of each calendar quarter. This is done in any mutually acceptable manner such as duplicate BLS 790 J-FD schedules or computer printouts.

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For information regarding data, delinquency, or solicitation of new units the State should contact the installations in its CES sample. If the problem cannot be resolved, the State agency should contact the BLS National Office through the appropriate BLS Regional Office.

BLS National Office
Jim Yule or Janet Joice
8 (202) 523-1460

U. S. DEPARTMENT OF TREASURY

Office of The Secretary
TUMS Accounting and Payroll Br., Rm. 7336
12th and Constitution Ave., N.W.
Washington, D.C. 20220

Major Industrial Classifications: SIC 9311, 9651, 9199 & 9221

U.S. DEPARTMENT OF TREASURY transmits data to all States on a monthly basis. The data reported include All Employees and Women Workers for each Treasury Department agency. Various forms are used for the collection of data including BLS 790 J-F and special forms used by some States. States should receive the data approximately 3 weeks after the reference week which includes the 12th of the month. The Treasury report may show wage data which should be disregarded, the wage data are cumulative totals from the ES-202 system and the 790 J-F schedule has no provisions for this information. The level of geographic detail is by county and city within each agency.

For information regarding data, delinquency, or solicitation of new units contact:

U.S. Department of Treasury
Anita Bryant 8 (202) 566-2354

U. S. FOREST SERVICE

Washington, D.C.

Major Industrial Classification: SIC 0851

The U.S. Forest Service provides BLS-Washington with employment data on a computer printout. These data are generally received in the BLS Washington office on a monthly or bimonthly basis as the employment counts become available. The data reported are all employee only. BLS-Washington summarizes the data by State and forwards the State totals to the Regional Offices for distribution to the cooperating State Agencies. States can expect to receive the data approximately 6 to 8 weeks after the reference month. The level of geographic detail is by State.

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U.S. FOREST SERVICE, Continued

Occasionally, the U.S. Forest Service provides geographically detailed lists, by county, of these data. County data are forwarded to the Regional Offices only for those States which have indicated their use of this information.

For information regarding data, delinquency, or solicitation of new units, contact:

Bureau of Labor Statistics
Jim Yule or Janet Joice
8 (202) 523-1460

US GYPSUM COMPANY

300 West Adams Street
Chicago, Illinois 60606

Major Industrial Classifications: SIC 2661, 3274, 3275 and 3296 (There are other minor classifications.)

US GYPSUM COMPANY transmits data for specific plants to the cooperating State Agencies on BLS 790 C schedules. The data reported include the complete line of CES employment, payroll and worker hours. States can expect to receive the data approximately two weeks after the reference week which includes the 12th of the month. The level of geographic detail is by establishment.

The State Agencies should not send solicitation requests directly to any establishment or central office of the company.

For information regarding data, delinquency, or solicitation of new units, contact:

Chicago Regional Office
Robert Jolly 8 (312) 353-6162

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APPENDIX D.3: CES MULTISTATE CONSTRUCTION REPORTERS

ACTIVE CES MULTISTATE CONSTRUCTION REPORTERS
(REPORTERS LISTED IN ALPHABETICAL SEQUENCE)

Name of Company	Home Office
Basic Construction Co.	Newport News, VA
Batson Cook Co.	West Point, N.Y.
Bechtel Corp.	San Francisco, CA
Borton, Inc.	Hutchinson, KA
Catalytic Construction Co.	Philadelphia, PA
Chicago Bridge & Iron Co.	Chicago, IL
Dravo Corp.	Pittsburgh, PA
Elgin National Industries, Inc-Roberts	Chicago, IL
Fegles Power Services, Inc.	Minneapolis, MN
Fluor Engineers & Construction	Los Angeles, CA
Gibbs & Hill, Inc.	New York City, NY
Great Lakes Dredge & DK	Chicago, IL
Hatzel & Buehler, Inc.	New York City
Herlihy Mid- Continent Co.	Chicago, IL
Jones, J.A. Construction Co.	Charlotte, NC

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APPENDIX D.3: CES MULTISTATE CONSTRUCTION REPORTERS

ACTIVE CES MULTISTATE CONSTRUCTION REPORTERS
(REPORTERS LISTED IN ALPHABETICAL SEQUENCE)

Name of Company	Home Office
Kellog M W Co. Pullman Inc. -	Houston, TX
(Company is reporting all employee counts only.)	
Kiewit Peter Sons & Co.	Omaha, NE
Lippert Bros., Inc.	Oklahoma City, OK
Manhattan Construction Co.	Muskogee, OK
McLean Contracting Co., Inc.	Baltimore, MD
Midland Ross Corp - Surface Co.	Toledo, OH
Morrison Knudson Company	Boise, ID
Newberg Gust K. Company	Chicago, IL
Olson Construction Company	Lincoln, NE
Pittsburgh Des Moines	Pittsburgh, PA
Reid R. J. Construction Co.	Birmingham, AL

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APPENDIX D.3: CES MULTISTATE CONSTRUCTION REPORTERS

ACTIVE CES MULTISTATE CONSTRUCTION REPORTERS
(REPORTERS LISTED IN ALPHABETICAL SEQUENCE)

Name of Company	Home Office
Richards & Assoc.	Carrollton, GA
Robertson H&H Co.	Ambridge, PA
Sheehan Pipeline Construction	Tulsa, OK
Stearns Roger Inc.	Denver, CO
(Stearns does not provide counts for construction-worker hours.)	
Stone & Webster Engineering	Boston, MA
Teer Nello L. Co.	Durham, NC
Tidewater Construction Co.	Norfolk, VA
Turner Construction Co.	New York City, NY
Webb Del & Construction Co.	Phoenix, AZ
Williams - McWilliams	New Orleans, LA
Wright & Lopez	Cedartown, GA
Wright Contracting Co.	Columbus, GA

APPENDIX D. 4: MAILING LIST FOR MULTISTATE CONSTRUCTION TRANSCRIPT FORMS
(SO-228)

Manual Reference: Section 6.5.1

ALABAMA	MR. DOUGLAS DYER, CHIEF RESEARCH AND STATISTICS AL DEPT OF INDUSTRIAL RELATIONS INDUSTRIAL RELATIONS BLDG. RM. 427 MONTGOMERY, AL 36130 (205) 261-5461
ALASKA	MR. CHUCK CALDWELL, CHIEF RESEARCH AND ANALYSIS SECTION ALASKA DEPARTMENT OF LABOR P.O. BOX 1149 JUNEAU, AK 99802 (907) 465-4500
ARIZONA	MR DAN ANDERSON RESEARCH ADMINISTRATOR AZ DEPT OF ECONOMIC SECURITY P.O. BOX 6123-733A PHOENIX, AZ 85005 (602) 255-3616
ARKANSAS	MR. COY COZART, CHIEF RESEARCH AND ANALYSIS SECTION ES DIVISION, ARK-DOL P. O. BOX 2981 LITTLE ROCK, ARKANSAS 72203 (501) 371-1541
CALIFORNIA	MS. JEANNE BARNETT, CHIEF EMPLOYMENT DATA AND RESEARCH DIVISION EMPLOYMENT DEVELOPMENT DEPARTMENT P. O. BOX 1679 SACRAMENTO, CALIFORNIA 95808 (916) 427-4675
COLORADO	GENE RUSHO, CHIEF COLORADO DIVISION OF EMPLOYMENT AND TRAINING RESEARCH AND DEVELOPMENT - 3RD FLOOR 1330 FOX STREET DENVER, COLORADO 80204 (303) 866-6316

APPENDIX D.4: MAILING LIST FOR MULTISTATE CONSTRUCTION TRANSCRIPT FORMS
(SO-228)

CONNECTICUT	MR. ROGER SKELLY, DIRECTOR RESEARCH AND INFORMATION CONNECTICUT LABOR DEPARTMENT 200 FOLLY BROOK BOULEVARD WETHERSFIELD, CONNECTICUT 06109 (203) 566-2120
DELAWARE	MR. JAMES K. MCFADDEN, CHIEF OFFICE OF OCCUPATIONAL & LABOR MARKET INFORMATION DELAWARE DEPARTMENT OF LABOR P.O. BOX 9029 NEWARK, DELAWARE 19711 (302) 368-6962
DISTRICT OF COLUMBIA	MR. RICHARD GRONER, CHIEF LABOR MARKET INFORMATION & ANALYSIS DC DEPARTMENT OF EMPLOYMENT SERVICES 500 C STREET N.W., ROOM 411 WASHINGTON, D.C. 20001 (202) 639-1642
FLORIDA	MS. LINDA FRAZIER, CHIEF BUREAU OF RESEARCH AND INFORMATION FL DEPT OF LABOR AND EMPLOYMENT SECURITY 2574 SEAGATE DRIVE - SUITE 201 TALLAHASSEE, FLORIDA 32301 (904) 488-6037
GEORGIA	MR. MILTON MARTIN, DIRECTOR LABOR INFORMATION SYSTEMS GEORGIA DEPARTMENT OF LABOR 254 WASHINGTON STREET, S.W. ATLANTA, GEORGIA 30334 (404) 656-3177
HAWAII	MR. FREDERICK PANG, CHIEF RESEARCH AND STATISTICS DEPT. OF LABOR AND INDUSTRIAL RELATIONS 830 PUNCHBOWL STREET, RM. 304 HONOLULU, HAWAII 96813 (808)548-7639

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IDAHO	MR. JAMES DAY, CHIEF RESEARCH AND ANALYSIS IDAHO DEPARTMENT OF EMPLOYMENT P. O. BOX 35 BOISE, IDAHO 83735 (208) 554-2755
ILLINOIS	DR. HARRY M. HARDWICK, DIRECTOR RESEARCH AND ANALYSIS DIVISION ILLINOIS BUREAU OF EMPLOYMENT SECURITY 910 SOUTH MICHIGAN AVENUE, (12TH FLOOR) CHICAGO, ILLINOIS 60605
INDIANA	MR. CHARLES MAZZA, CHIEF OF RESEARCH INDIANA EMPLOYMENT SECURITY DIVISION 10 NORTH SENATE AVENUE INDIANAPOLIS, INDIANA 46204 (317) 232-7701
IOWA	MR. STEVE SMITH, CHIEF IOWA DEPARTMENT OF JOB SERVICE AUDIT & ANALYSIS DEPARTMENT 1000 EAST GRAND AVENUE DES MOINES, IOWA 50319 (505) 281-8181
KANSAS	MR. FRED E. RICE, CHIEF RESEARCH AND ANALYSIS KANSAS DEPARTMENT OF HUMAN RESOURCES 401 TOPEKA AVENUE TOPEKA, KANSAS 66603 (913) 296-5061
KENTUCKY	MR. ED BLACKWELL, ACTING MANAGER LABOR MARKET RESEARCH & ANALYSIS BRANCH DEPARTMENT OF MANPOWER SERVICES 275 E. MAIN STREET FRANKFORT, KENTUCKY 40621 (502) 564-7976
LOUISIANA	MR. OLIVER ROBINSON, DIRECTOR RESEARCH AND STATISTICS SECTION LOUISIANA STATE DEPARTMENT OF LABOR P. O. BOX 44094--CAPITOL STATION BATON ROUGE, LOUISIANA 70804 (504) 342-3140

APPENDIX D.4: MAILING LIST FOR MULTISTATE CONSTRUCTION TRANSCRIPT FORMS
(SO-228)

MAINE	MR. RAYNOLD A. FONGEMIE, DIRECTOR DIVISION OF RESEARCH & ANALYSIS MAINE DEPARTMENT OF LABOR 20 UNION STREET AUGUSTA, MAINE 04330 (207) 289-2271
MARYLAND	MR. PAT ARNOLD, DIRECTOR RESEARCH AND ANALYSIS DIVISION MARYLAND DEPT. OF EMPLOYMENT & TRAINING 1100 NORTH EUTAW STREET BALTIMORE, MARYLAND 21201 FTE (301) 383-5000
MASSACHUSETTS	MS. RENA KOTTCAMP, DIRECTOR OF RESEARCH MASSACHUSETTS DIVISION OF EMPLOYMENT SECURITY CHARLES F. HURLEY BUILDING BOSTON, MASS. 02114 (617) 727-6556
MICHIGAN	MR. VON D. LOGAN, DIRECTOR RESEARCH AND STATISTICS DIVISION MICHIGAN EMPLOYMENT SECURITY COMMISSION 7310 WOODWARD AVENUE DETROIT, MICHIGAN 48202 (313) 876-5445
MINNESOTA	DR. HAL LOFGREN, DIRECTOR RESEARCH AND STATISTICAL SERVICES OFFICE MINNESOTA DEPARTMENT OF JOBS AND TRAINING 390 NORTH ROBERT STREET ST. PAUL, MINNESOTA 55101 (612) 296-6545
MISSISSIPPI	MR. RAIFORD G. CREWS, CHIEF LABOR MARKET INFORMATION DEPARTMENT MISSISSIPPI EMPLOYMENT SECURITY COMMISSION P. O. BOX 1699 JACKSON, MISSISSIPPI 39215-1699 (601) 961-7424

APPENDIX D. 4: MAILING LIST FOR MULTISTATE CONTRUCTION TRANSCRIPT FORMS
(SO-228)

MISSOURI	MR. TOM RIGHOUSE, CHIEF RESEARCH AND ANALYSIS MISSOURI DIVISION OF EMPLOYMENT SECURITY P. O. BOX 59 JEFFERSON CITY, MISSOURI 65104 (314) 751-3591
MONTANA	MR. BOB RAFFERTY, CHIEF RESEARCH AND ANALYSIS DEPT. OF LABOR AND INDUSTRY P. O. BOX 1728 HELENA, MONTANA 59601 (406) 444-2661
NEBRASKA	MR. WENDELL OLSON, CHIEF RESEARCH AND STATISTICS NEBRASKA DEPARTMENT OF LABOR P. O. BOX 94600 LINCOLN, NEBRASKA 68509 (402) 475-8451 EXT 243
NEVADA	MR. JAMES S. HANNA, CHIEF EMPLOYMENT SECURITY RESEARCH NEVADA EMPLOYMENT SECURITY DEPARTMENT 500 E. THIRD STREET CARSON CITY, NEVADA 89713 (702) 885-4550
NEW HAMPSHIRE	MR. WESLEY NOYES, DIRECTOR ECONOMIC ANALYSIS AND REPORTS NEW HAMPSHIRE DEPARTMENT OF EMPLOYMENT SECURITY 32 SOUTH MAIN STREET CONCORD, NEW HAMPSHIRE 03301 (603) 224-3311
NEW JERSEY	MR. ARTHUR J. O'NEAL, JR., DIRECTOR DIVISION OF PLANNING AND RESEARCH NEW JERSEY DEPARTMENT OF LABOR P. O. BOX 2765 TRENTON, NEW JERSEY 08625 (609) 292-2643

APPENDIX D. 4: MAILING LIST FOR MULTISTATE CONTRUCTION TRANSCRIPT FORMS
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NEW MEXICO	MR. ROBERT L. WELLS, CHIEF ECONOMIC RESEARCH AND ANALYSIS (6097) EMPLOYMENT SECURITY DEPARTMENT P. O. BOX 1928 ALBUQUERQUE, NEW MEXICO 87103 (505) 845-8647
NEW YORK	MR. JEREMY P. SCHRAUF, DIRECTOR NEW YORK STATE DEPT. OF LABOR DIVISION OF RESEARCH AND STATISTICS STATE OFFICE CAMPUS -- BUILDING 12 ALBANY, NEW YORK 12240 (518) 457-6181
NORTH CAROLINA	MR. GREG SAMPSON, DIRECTOR LABOR MARKET INFORMATION DIV. EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA P.O. BOX 25903 RALEIGH, NORTH CAROLINA 27611 (929) 733-2936
NORTH DAKOTA	MR. TOM PEDERSON, CHIEF RESEARCH AND STATISTICS JOB SERVICE NORTH DAKOTA P.O. BOX 1537 BISMARCK, NORTH DAKOTA 58505 (701) 224-2868
OHIO	MS. DIXIE SUMMERS, DIRECTOR LABOR MARKET INFORMATION DIV. OHIO BUREAU OF EMPLOYMENT SERVICES P.O. BOX 1618 COLUMBUS, OHIO 43216 (614) 466-8806
OKLAHOMA	MR. W. J. BOWMAN, CHIEF RESEARCH AND PLANNING DIVISION OKLAHOMA EMPLOYMENT SECURITY COMMISSION 310 WILL ROGERS MEMORIAL OFFICE BUILDING OKLAHOMA CITY, OKLAHOMA 73105 (405) 521-3735

APPENDIX D. 4: MAILING LIST FOR MULTISTATE CONSTRUCTION TRANSCRIPT FORMS
(SO-228)

OREGON	MR. DONOVAN R. STEWARD, DIRECTOR RESEARCH AND STATISTICS DEPARTMENT OF HUMAN RESOURCES 875 UNION STREET N.E. SALEM, OREGON 97311 (503) 378-3220
PENNSYLVANIA	MR. CARL THOMAS, CHIEF RESEARCH AND STATISTICS DIVISION PENNSYLVANIA DEPT. OF LABOR AND INDUSTRY 7TH AND FORSTER STREETS HARRISBURG, PENNSYLVANIA 17121 (717) 787-3265
PUERTO RICO	MR. BENJAMIN SANTIAGO B., CHIEF DEPARTMENT OF LABOR & HUMAN RESOURCES BUREAU OF LABOR STATISTICS 505 MUNOZ RIVERA AVE., 17TH FLOOR HATO REY, PUERTO RICO 00918 (809) 754-5339
RHODE ISLAND	MR. RAYMOND MORZ, SUPERVISOR R.I. DEPARTMENT OF EMPLOYMENT SECURITY EMPLOYMENT SECURITY RESEARCH 24 MASON STREET PROVIDENCE, RHODE ISLAND 02903 (401) 277-3704
SOUTH CAROLINA	MR. RAY DRAFTS, DIRECTOR SOUTH CAROLINA EMPLOYMENT SECURITY COMMISSION P.O. BOX 995 COLUMBIA, SOUTH CAROLINA 29202 (803) 758-8983
SOUTH DAKOTA	MS. MARY SUSAN VICKERS, CHIEF LABOR MARKET INFORMATION CENTER DEPARTMENT OF LABOR P.O. BOX 1730 ABERDEEN, SOUTH DAKOTA 57401 (605) 622-2314

APPENDIX D.4: MAILING LIST FOR MULTISTATE CONTRUCTION TRANSCRIPT FORMS
(SO-228)

TENNESSEE MR. JOE S. CUMMINGS, CHIEF
RESEARCH AND STATISTICS
TENNESSEE DEPARTMENT OF EMPLOYMENT SECURITY
519 CORDELL HULL OFFICE BUILDING
NASHVILLE, TENNESSEE 37219
(615) 741-2284

TEXAS MR. HORACE GOODSON, CHIEF
ECONOMIC RESEARCH AND ANALYSIS
TEXAS EMPLOYMENT COMMISSION
15TH AND CONGRESS AVENUE
AUSTIN, TEXAS 78778
(512) 397-4540

UTAH MR. LARRY WARDLE, CHIEF
RESEARCH AND ANALYSIS
UTAH DEPARTMENT OF EMPLOYMENT SECURITY
P.O. BOX 11249
SALT LAKE CITY, UTAH 84147
(801)533-2014

VERMONT MR. THOMAS DOUSE, CHIEF
RESEARCH AND STATISTICS
VERMONT DEPARTMENT OF EMPLOYMENT & TRAINING
P.O. BOX 488
MONTPELIER, VERMONT 05602
(802) 229-0311

VIRGIN ISLANDS MS. BETTY DEUTERMAN, DIRECTOR
BUREAU OF LABOR STATISTICS
V.I. DEPARTMENT OF LABOR
P.O. Box 818
ST. THOMAS, VIRGIN ISLANDS 00801
(809) 776-3700

VIRGINIA MR. RALPH ROBINSON, DIRECTOR
ECONOMIC INFORMATION SERVICES
VIRGINIA EMPLOYMENT COMMISSION
P.O. BOX 1358
RICHMOND, VIRGINIA 23211
(804) 786-7496 FTS 936-7496

APPENDIX D. 4: MAILING LIST FOR MULTISTATE CONSTRUCTION TRANSCRIPT FORMS
(SO-228)

WASHINGTON MR. IRV LEBBERG, DIRECTOR
LABOR MARKET & ECONOMIC ANALYSIS BRANCH
WASHINGTON EMPLOYMENT SECURITY DEPARTMENT
212 MAPLE PARK
OLYMPIA, WASHINGTON 98504
(206) 753-5224

WEST VIRGINIA MR. RALPH HALSTEAD, ASSISTANT ES DIRECTOR
LABOR AND ECONOMIC RESEARCH SECTION
DEPT. OF EMPLOYMENT SECURITY
112 CALIFORNIA AVENUE
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APPENDIX D.5: NATIONAL KEY REPORTERS IN THE CES SURVEY

Manual Reference: Section 8.1.2.C and 5.2.B.2

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A listing of "key" reporters for national estimates is produced regularly. These reporters are designated "key" because of their relative size and because they are trend leaders within industries.

National criteria require that "key" reporters be establishments with at least 10,000 employees or that the reporter comprise at least 10% of the sample for an estimating cell.

Every effort should be made to ensure the inclusion of "key" reporters in each monthly first closing, due to their importance to the survey. (An asterisk indicates that the reporter was not identified as a National key reporter last year.)

State	Report		Owner--		Establishment Name
Code	Number	SIC	Ship		
01	00246	3353	5		REYNOLDS METALS CO ALLOYS P
01	01999	9199	2		ALABAMA STATE GOVT
01	02000	2823	5		COURTAULDS NORTH AMERICA IN
01	02371	2385	5		CENTRE MFG CO
* 01	03266	2491	5		MILLER T R MILLS CO INC
01	04539	2363	5		WEATHER TAMEX INC
* 01	05209	4911	5		ALABAMA POWER CO
* 01	05299	2879	5		CIBA-GEIGY CORP
01	07004	2253	5		RUSSELL CORP
04	02291	8211	3		PIMA COUNTY ELEMENTARY SCHO
04	02298	8221	2		ARIZONA UNIVERSITY OF
04	02844	9199	2		ARIZONA DEPUTY STATE AUDITO
* 04	05269	1021	5		DUVAL SIERRITA CORP
04	08891	3674	5		MOTOROLA INC
05	00193	3873	5		TIMEX CORPORATION
05	02294	3632	5		WHIRLPOOL CORP
05	04207	2044	5		ARK RICE GROWERS COOP ASN
05	05162	2017	5		POULTRY SPECIALIST
06	01129	3731	5		TODD SHIPYARDS CORP
06	01441	2062	5		CALIF & HAWAIIAN SUG
06	03501	3581	5		VENDORLATOR MFG CO
06	08960	4463	5		PACIFIC MARITIME ASSOC
* 06	11161	3944	5		MATTEL INC
06	12052	3951	5		GILLETTE CO THE PAPER MATE
06	12439	3673	5		VARIAN ASSOCIATES
06	13625	9131	3		ORANGE COUNTY GOVT
06	13627	9131	3		SAN DIEGO COUNTY GOVT
06	13648	9131	3		LOS ANGELES CITY GOVT
06	13880	8211	3		ALAMEDA COUNTY SCHOOLS

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06	13988	8211	3	ORANGE COUNTY SCHOOLS
06	14162	8221	5	STANFORD UNIVERSITY
06	14720	3511	5	SOLAR TURBINES INCORPORATED
06	14742	4511	5	UNITED AIRLINES INC
06	14744	5065	5	HEWLETT-PACKARD CO NEELY EN
06	15080	5912	5	THRIFTY DRUG STORES CO INC
06	15226	2384	5	WIOR BROS MFG CO INC
06	15313	2084	5	GALLO E & J WINERY
06	16164	3662	5	HUGHES AIRCRAFT CO
06	16900	9131	3	SANTA CLARA COUNTY GOVT COU
06	17607	7948	5	LOS ANGELES TURF CLUB INC
06	17890	3843	5	UNITEK CORP
06	18676	3721	5	MCDONNELL DOUGLAS CORP
06	18750	8221	2	CALIFORNIA UNIVERSITY OF
06	18887	6361	5	TICOR TITLE INS CO OF CALIF
06	19442	3761	5	LOCKHEED MISSILES & SPACE C
06	19466	3721	5	LOCKHEED AIRCRAFT CORP CALI
06	21944	3662	5	T R W SYSTEMS
* 06	22036	3761	5	ROCKWELL INTL SPACE DIV
06	22169	8922	2	UNIV OF CAL LAWRENCE LABS
06	22326	8211	3	SAN BERNADINO COUNTY SCHOOL
06	22908	8211	3	VENTURA COUNTY SUPT OF SCHO
06	22909	3721	5	N6RTHR6P CORP AIRCRAFT DIV
06	24143	5251	5	HANDYMAN THE
06	24407	2386	5	SAWYER TANNING CO
06	24883	7369	5	FED ELEC CORP WESTRN TEST R
06	26096	7813	5	TWENTIETH CENTURY FOX FILM
06	26439	8211	3	RIVERSIDE COUNTY SUPT OF SC
06	30424	3021	5	VAN DOREN RUBBER CO
06	31093	6025	5	BANK OF AMERICA NT & SA
06	32291	2591	5	LOUVERDRAPE INC
06	32303	8081	5	SO CAL PERMANENTE MED GP
06	33488	3629	5	INTERNATIONAL RECTIFIER COR
06	33489	3832	5	BECKMAN INSTRUMENTS INC
* 06	33859	7832	5	NATION WIDE THEATERS CORP
* 06	33960	5499	5	SIERRA SPRING WATER CO
06	34670	5172	5	ATLANTIC RICHFIELD CO SALES
* 06	35919	2098	5	GOLDEN GRAIN MACARONI
06	36108	2441	5	AMERICAN FOREST PROD CO
* 06	36310	8999	5	EDUCATIONAL TESTING SERV
06	37200	3795	5	FMC CORP ORDNANCE DIV
06	37643	4811	5	GENERAL TELEPHONE CO OF CAL
06	37702	8221	2	CALIFORNIA UNIVERSITY OF
06	39791	7829	5	INTERNATIONAL CREATNE MANAGE
* 06	40100	8699	5	AUTO CLUB OF SO CALIF
* 06	40274	7369	5	BOEING SERVICE INTERNTL INC
06	50193	7379	5	TELOS COMPUTING INC
06	50656	2091	5	PAN PACIFIC FISHERIES

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06	51971	8211	3	SAN DIEGO COUNTY SUPT OF SC
06	52045	6123	5	HOME SAVINGS & LOAN ASSN
06	52626	7814	5	UNIVERSAL CITY STUDIOS MCA
06	53042	3648	5	OPTICAL RADIATION CORP
06	53774	5499	5	OVERHILL FOODS INC
06	54921	5411	5	VONS GROCERY CO
06	55706	3573	5	INTERNATL BUS MACHINES CORP
06	56239	3761	5	GENERALDYNAMICS&CONVAIR DIV
06	56959	3731	5	NATL STEEL & SHIPBUILDING C
06	57325	8421	5	ZOOLOGICAL SOCIETY OF SAN D
06	57445	3576	5	NATIONAL CONTROLS INC
06	57768	9199	2	STATE GOVT
06	57784	9199	2	STATE GOVT
06	58937	3721	5	ROCKWELL INTERNATIONAL
06	59293	5949	5	HOUSE OF FABRICS INC
06	61798	3662	5	HUGHES AIRCRAFT CO
* 06	61799	3662	5	HUGHES AIRCRAFT RADAR SYSTE
06	63155	5441	5	SEES CANDY SHOPS INC
06	63834	7814	5	PARAMOUNT PICTURE CORP
06	64202	5732	5	FEDERATED ELECTRONICS INC
06	64890	8221	5	UNIVERSITY OF SO CALIF
06	65043	8221	2	UNIVERSITY OF CALIF
06	65755	7629	5	A T & T TECHNOLOGIES
* 06	65890	4821	5	WESTERN UNION TELEGRAPH CO
06	67142	2342	5	OLGA CO
06	67312	7823	5	ORION PICTURES DISTRIB CORP
06	68135	1442	5	CON ROCK CO
06	68152	3825	5	HEWLETT PACKARD
06	68161	4231	5	WESCARTAGE CO INC
* 06	69431	5733	5	WHEREHOUSE
* 06	69432	6025	5	BANK OF AMERICA
08	00172	3161	5	SAMSONITE CORP
08	00216	2082	5	COORS ADOLPH CO
08	03036	9131	3	CITY AUDITORS OFFICE
* 08	03040	3761	5	MARTIN CO THE
08	05439	3041	5	GATES RUBBER COMPANY
08	05441	8221	2	COLORADO UNIV OF
08	07133	1061	5	CLIMAX MOLYBDENUM CO
08	07134	1061	5	CLIMAX MOLYBDENUM CO
08	07235	9199	2	COLO STATE-DEPT OF ADMIN
08	07268	4121	5	YELLOW CAB
08	07298	3264	5	COORS PORCELAIN CO
08	07299	3269	5	COORS PORCELAIN CO
08	07363	6153	5	DINERS CLUB INC
08	07380	6722	5	OPPENHEIMER ASSET MGMT
08	08047	4941	5	CITY OF COLO SPGS UTILITY
08	08375	4811	5	MOUNTAIN STATES TEL & TEL
09	00338	3721	6	UNITED AIRCRAFT CORP SIKOR

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09	00360	3579	6	PITNEY BOWES INC
09	00797	3724	6	UNITED AIRCRAFT CORP PR &
09	02515	2833	6	PFIZER CHARLES & CO
09	03347	9131	2	CONNECTICUT STATE GOVT
09	03409	3832	6	PERKIN ELMER CORP
*	09	03607	3961	6 EYELET SPECIALTY CO
09	04107	4811	6	SOUTHERN NEW ENGLAND TEL CO
09	04114	3731	6	ELECTRIC BOAT CO
09	04126	2387	6	SWANK INC CRESTLINE DIV
09	04686	2085	6	HEUBLEIN INC
*	09	05016	5451	6 CUMBERLAND FARM STORES
*	09	05888	3576	6 REVERE CORP
*	10	00057	2816	5 DU PONT E I DE NEMOURS
10	01597	2647	5	INTERNATIONAL PLAYTEX CORPO
10	02954	2075	5	TOWNSEND S INC
10	03763	2824	5	DUPONT ADMIN
11	01672	8211	2	D C GOVERNMENT PUBLIC SCHOO
11	01673	9199	2	D C GOVERNMENT
*	11	03233	5681	5 SAKS INC
12	00810	1475	5	INTERNATIONAL MIN & CHEM
12	03934	7041	5	MOOSEHAVEN SUPREME LODGE
12	04058	4511	5	EASTERN AIRLINES INC
12	04197	8299	5	EMBRY-RIDDLE AERONAUTICAL
*	12	04522	3761	5 MARTIN COMPANY
12	08881	3693	5	COULTER ELECTRONICS INC
12	10547	3692	5	GENERAL ELECTRIC CO
12	10833	8211	3	BD OF PUBLIC INSTRUCTION
12	11298	9131	3	MET DADE CO FINANCE CO
12	11320	2874	5	GARDINIER INC
*	12	12269	2061	5 SUGAR CANE GROWERS
12	12843	8211	3	SUPERINTENDENT OF PUBLIC
12	12845	8211	3	PINELLAS CO SCHOOL BOARD
12	14308	7396	5	THE SPERRY HUTCHINSON CO., I
12	14541	4811	5	SOUTHERN BELL TEL & TEL
12	16629	3021	5	SUAVE SHOE CORPORATION
12	17826	2874	5	NEW WALES CHEMICALS INC
12	18613	2121	5	JNO H SWISHER & SON
12	18848	8211	3	PALM BEACH COUNTY SCHOOL BO
*	12	21909	4941	5 METRO-DADE WATER & SEWER DE
12	22886	2874	5	OCCIDENTAL CHEMICAL COMPANY
*	12	26202	7392	5 MARTIN-MARIETTA AEROSPACE
*	12	27059	3446	5 METAL INDUSTRIES INC
13	00067	2296	7	GOODRICH B F CO MARTHA
13	00075	2296	6	GOODYEAR TIRE & RUBBER CO T
13	00198	2611	6	BRUNSWICK PULP & PAPER
13	00321	1454	6	ENGLEHARD MINERALS
13	00422	3299	7	BABCOCK & WILCOX CO

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
13	00792	1455	6	ENGELHARD MINERALS & CHEMIC
13	02122	2661	7	ARMSTRONG CORK CO
13	02703	2283	6	COATS & CLARK INC
13	03035	2611	6	ITT RAYONIER INC
13	03221	2087	7	COCA COLA CO
13	03748	2816	7	AMERICAN CYANAMID CO
13	04757	3721	6	LOCKHEED ARCFT CORP LCKHD G
13	05385	3799	6	TEXTRON INC E Z GO CAR DIV
13	05802	3873	6	GENERAL TIME CORP PLANT 1
13	05875	2062	6	SAVANNAH INDUSTRIES & FOODS
13	06447	4511	6	DELTA AIR LINES INC
13	07719	8221	2	GEORGIA UNIV OF ATHENS
13	07733	7351	6	MCGRAW HILL INC
13	09676	4811	5	SOUTHERN BELL
13	10133	2296	5	GOODYEAR TIRE & RUBBER
*	13	11421	2231	5 J P STEVENS & CO., INC.
*	13	11765	3964	5 Y K K INDUSTRIES
15	00602	6611	5	NATIONAL MORTGAGE & FINANCE
15	02167	2061	5	HILO COAST PROCESSING CO-OP
15	02611	8211	2	STATE GOVT EDUC
15	02612	8221	2	STATE GOVT UNIV OF HI
16	00351	1044	5	SUNSHINE MINING
17	00370	3211	5	LIBBEY OWENS FORD GLASS
*	17	00900	3651	5 ZENITH RADIO CORP
17	02305	2052	5	NABISCO INC
17	04066	3431	5	ELKAY MFG CO
*	17	04088	6011	5 FEDERAL RESERVE BANK
17	04540	8221	2	UNIVERSITY OF ILL PAYROLL D
17	05514	8621	5	AMERICAN MED ASSN-PUBLICITN
17	05696	2087	5	GENERAL FOODS CORP KOOL AID
17	06633	3351	5	OLIN MATHIESON CHEM CORP OL
17	06891	3824	5	STEWART WARNER CORP MOT VEH
17	07707	4111	3	CTA ACCT ROOM # 734
17	07896	4952	5	CHICAGO CITY SANITARY DISTR
17	08107	7397	5	UNDERWRITERS LAB INC
17	08968	2046	5	CPC INTERNATIONAL INC
*	17	09965	8999	5 HANSEN A S INC
17	10758	4511	5	UNITED AIR LINES
17	11727	2046	5	STALEY A E MFG CO
17	12294	2045	5	GENERAL MILLS INC
*	17	12852	3652	5 CAPITOL RECORDS
17	13156	2654	5	SWEETHEART CUP CORP
17	16346	2067	5	WRIGLEY WM JR CO
17	16612	2283	5	CARON INTERNATIONAL
17	16707	3531	5	CATERPILLAR TRACTOR CO
17	16925	9131	3	COOK COUNTY
17	17023	8211	3	CHICAGO BD OF ED-TEACHERS G

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
17	17159	8211	3	CHGO BD OF EDU CIVIL SER
17	18032	5681	5	BAKER & TAYLOR
17	23596	6711	5	STANDARD OIL CO
*	17	27109	2389	5 COLLEGIATE CAP & GOWN MFG
17	30417	3322	5	WAGNER CASTINGS CO
17	30492	3743	5	GEN MOTORS-ELECTRO PL 1 & 2
17	31380	3398	5	T C INDUSTRIES INC
17	31539	4811	5	ILL BELL TEL FL 50 CHGO SUB
17	31564	3566	5	DRESSER INDUSTRIES INC
*	17	31696	9131	3 CITY OF CHICAGO CONTRLRS OF
17	31819	4742	5	MECO INC
*	17	34485	3199	5 JOSTEN BUSINESS PRODUCT INC
*	17	34619	5087	5 ADMIRAL MNTNN&CHEMICAL SPLY
*	17	35208	5411	5 DOMINICKS FINER FOODS INC
*	17	36502	7531	5 BLITZ BODY CORP
18	00056	3694	5	G M C DELCO REMY EL P
18	00169	3312	5	INLAND STEEL CO
18	00286	3731	5	JEFFBOAT INC
18	00420	3651	5	G M C DELCO RADIO 1 2 3RA E
18	00532	3519	5	CUMMINS ENGINE CO
18	00611	2085	5	SEAGRAM JOSEPH E & SONS
18	00717	3632	5	WHIRLPOOL CORP
18	00888	3676	5	CTS OF ELKHART
18	00946	3713	5	G M C CHEVROLET COMM BOENGI
18	02935	2517	5	ZENITH ELECTRONICS CORP OF
18	04744	3629	5	WESTINGHOUSE ELEC CORP
18	04889	2045	5	PILLSBURY CO THE
18	05087	3324	5	AUSTENAL CO
18	05159	3676	5	C T S OF BERNE INC
18	05473	2879	5	LILLY ELI COMPANY
18	05474	2831	5	LILLY ELI COMPANY
18	05699	3792	5	HOLIDAY RAMBLER CORP
18	05843	8221	2	PURDUE UNIV LAFAYETTE CAMPU
18	06420	2599	5	HILL-ROM COMPANY INC
18	07039	3647	5	G M C GUIDE DIV
18	07181	3534	5	OTIS ELEVATOR CO
18	07225	3652	5	NATIONAL BRAODCASTING CORP
18	07263	3995	5	BATESVILLE CASKET CO INC
18	07534	8221	2	INDIANA UNIVERSITY
18	07729	3716	5	PACE ARROW OF IND INC
18	08478	3493	5	DETROIT STEEL PRODUCTS
19	00237	3951	5	SHEAFFER PEN CO
19	00283	2043	5	QUAKER OATS COMPANY
19	02701	8221	2	IOWA UNIV OF
19	04066	7396	5	NIELSEN CLEARING HOUSE
19	06569	3633	5	MAYTAG CO THE PLANTS 1 & 2
19	07878	3716	5	WINNEBAGO INDUSTRIES
*	19	09245	3523	5 JOHN DEERE COMPONENT WORKS

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
19	09263	2352	5	K PRODUCTS INC
* 19	12467	7379	5	COMMUNICATIONS DATA SERVICE
20	04133	2771	5	HALLMARK CARDS INC
20	04821	3728	5	BOEING CO THE AIRPL DIV WIC
* 20	07876	6124	5	COLUMBIA SAVINGS ASSN
* 21	00045	3312	6	ARMCO INC
21	00299	2111	6	MORRIS PHILLIP & CO LTD
21	01226	3582	6	CISSELL MFG COMPANY
21	01392	3633	6	GE CO APPLIANCE PARK NO 10
21	01395	3632	6	GE CO APPLIANCE PARK NO 10
21	01424	8211	3	JEFFERSON CO BOARD OF EDUCA
21	01458	3631	6	GE CO RANGE & WATER HEATER
21	01500	3963	6	UNIVERSAL FASTENERS INC
21	02553	3572	6	IBM CORP
21	02693	8221	2	KENTUCKY UNIVERSITY OF
21	02696	3431	6	AMERICAN STANDARD
21	03899	2385	6	KELLWOOD CO
22	00616	2873	5	OLIN CORPORATION
22	01727	2812	5	PPG INDUSTRIES INC INDL CHE
22	02135	3731	5	AVONDALE SHIPYARDS
22	02435	3582	5	PELLERIN MILNOR CORP
22	05385	3764	5	MARTIN MARIETTA AEROSPACE
22	05436	2323	5	WEMBLEY INC
23	00139	3731	5	BATH IRON WKS CORP
23	03020	6371	5	UNION MUTUAL LIFE INS CO
23	03375	5941	5	BEAN L L INC
24	00278	2062	5	AMSTAR CORP
24	03264	8211	3	BALTIMORE CITY SCHOOLS
24	03340	8221	2	MARYLAND UNIV OF
24	03477	2816	5	SCM CORP GLIDDEN DURKEE DIV
24	04847	2385	5	LONDONTOWN MFG CO THE
24	05962	6351	5	FIDELITY & DEPOSIT CO OF MD
24	06550	2591	5	ROPER EASTERN
24	07494	2385	5	LONDONTOWN MFG CO
24	07579	3631	5	G E CO APPLIANCE GROUP
24	07804	2385	5	MISTY HARBOR LTD
24	08043	5719	5	BEST PRODUCTS CO INC
24	08073	7372	5	I B M FEDERAL SYSTEMS DN
24	09233	7379	5	CONTROL DATA CORP
24	09403	8211	3	BALT CO BD OF EDUC
24	09739	8211	3	MONTG CO PUBLIC SCHOOLS
24	09951	9199	3	BALTIMORE CITY GOVT
24	11847	8211	3	BOARD OF EDUC PR GEOS CTY

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
25	00962	3915	5	LEACH & GARNER CO
25	01030	3914	5	REED & BARTON CORP
25	01113	3463	5	WYMAN GORDAN CO
25	01162	3579	5	SIMPLEX TIME RECORDER
25	01746	3851	5	AMERICAN OPTICAL CO
25	06158	8221	2	UNIVERSITY OF MASSACHUSETTS
25	06448	3291	5	NORTON CO
25	07557	2649	5	DENNISON MFG CO
* 25	07730	3731	5	GENERAL DYNAMICS CORP
* 25	07769	3661	5	WESTERN ELEC DEPT 12WL30113
* 25	07779	3463	5	WYMAN GORDON CO
25	08506	3573	5	WANG LABORATORIES
25	08937	3829	5	FENWAL INC
25	09401	8221	5	MASS INSTITUTE OF TECH
25	09415	3421	5	THE GILLETTE CO
25	09972	3823	5	FOXBORO COMPANY
* 25	10491	3511	5	G E CO MAR TURB
25	10497	3674	5	DIGITAL EQUIPMENT CORP
25	10602	8221	5	HAVARD UNIVERSITY
25	10783	3172	5	BUXTON INC
* 25	11845	4811	5	N E TEL & TEL
* 25	12106	6722	5	MASS FINANCIAL SERVICES COR
25	12410	6124	5	MERCHANTS COOPERATIVE BANK
25	12704	6124	5	HYANNIS COOPERATIVE BANK
* 25	16233	3356	5	AVCO CORPORATION
* 25	17246	6281	5	BOSTON FINANCIAL DATA SERVI
26	00152	2522	5	STEELCASE INC
* 26	00543	3592	5	GMC-DIESEL EQUIPMENT
26	00860	2043	5	KELLOGG CO-PAYROLL
* 26	00928	2521	5	HERMAN MILLER INC
26	01020	3711	5	G M C TRUCK & COACH
26	01034	3711	5	GMC OLDSMOBILE
26	01037	3711	5	GMC PONTIAC MOTORS
26	01118	3322	5	GMC-CENTRAL FOUNDRY
26	02188	4911	5	DETROIT EDISON CO
26	02365	3519	5	GMC-DET-DIESEL-ALLIS
26	03910	3714	5	GMC-A C SPARK PLUG
26	05163	7041	5	THE GRAND LODGE F-A
26	05779	2396	5	GMC INLAND GR RAPIDS
26	05935	3714	5	GMC HYDRA Matic DIV
26	06045	2396	5	GMC-FISHER BODY
26	06157	9131	3	CITY OF DETROIT
26	06162	8221	2	MICH STATE UNIVERSIT
26	06165	8211	3	BOARD OF EDUCATION

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
26	06316	3795	5	GENERAL DYNAMIC
*	26 06913	3714	5	GMC-STEERING GEAR PLT
26	08566	2396	5	FORD UTICA TRIM PLAN
26	09411	3711	5	GMC BUICK MTR MFG PL
26	11014	8221	2	UNIVERSITY OF MICHIG
26	11707	3211	5	FORD DEA GLASS PLT
26	12273	3711	5	FORD MOTOR STYLING
26	12317	3574	5	BURROUGHS GENL ACCT
26	14307	2841	5	AMWAY CORP
26	14469	2541	5	HAWORTH MFG INC
26	15358	4811	5	MICHIGAN BELL TELE C
26	15966	8321	2	MICH DEPT SOCIAL SERVICES
26	16200	7531	5	CARS-CONCEPTS RESCH
26	17693	3632	5	WHITE CONSOLIDATED IND INC
*	26 18015	8999	5	PENSION GROUP SERV INC
*	26 18899	3795	5	GENERAL DYNAMICS
*	26 19290	5198	5	PPG INDUSTRIES INC
27	00601	3489	5	FMC CORP NORTHERN ORDNANCE
27	00660	2641	5	MINNESOTA MINING
*	27 00733	3482	5	FEDERAL CARTRIDGE
27	02107	1011	5	MINNESOTA ORE OPERATIONS
27	02588	2041	5	PILLSBURY THE CO
27	02780	1011	5	RESERVE MINING CO
27	03283	2063	5	AMER CRYSTAL SUGAR CO
27	03689	1011	5	ERIE MINING CO
27	03795	8011	5	MAYO CLINIC
27	03803	3822	5	HONEYWELL INC
27	03804	3483	5	HONEYWELL INC
27	04111	8221	2	MINNESOTA UNIVERSITY SCHOOL
27	04309	2021	5	ASSOCIATED MILK PRODUCERS I
27	07318	2645	5	SMEAD MFG CO
27	08415	3573	5	CONTROL DATA
*	27 09077	5431	5	LYNDALE FRUIT & VEG MARKET
*	28 00384	3646	5	DAY BRITE LIGHTING INC
28	00916	3553	5	DELTA INT MACHINE INC
28	02079	3534	5	DOVER CORPORATION-ELEVATOR
28	03492	3731	5	INGALLS SHIPBUILDING CORP
28	05115	2754	5	HALL OF MISSISSIPPI
29	00058	3131	5	BROWN SHOE CO
29	00851	2082	5	ANHEUSER BUSCH INC
29	01671	1031	5	ST JOE MINERALS CORP
29	02774	4742	5	ST LOUIS REFRIGR CAR CO
29	02905	3482	5	REMINGTON ARMS CO INC
29	02959	3255	5	GREEN A P REFRACTORIES CO

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
29	05030	3255	5	NATL REFRACTORIES & MINERAL
29	05362	2771	5	HALLMARK CARDS INC
29	09261	1031	5	AMAX LEAD COMPANY OF MISSOU
29	1\$0t2	4811	5	SOUTHWESTERN BELL TEL CO
* 29	10038	3731	5	CARUTHERSVILLE SHIPYARD
29	10388	2352	5	PARAMOUNT CAP CO
29	11704	3274	5	MISSISSIPPI LIME CO
29	13233	3332	5	ST JOSEPH MINERALS CORP
* 29	15256	3721	5	MCDONNELL DOUGLAS CORP HQ
31	00096	3799	6	OUTBOARD MARINE CORP
* 32	00756	3339	6	TITANIUM METALS CORP
33	01935	3549	6	MARKEM MACHINE CO
34	00039	2833	5	MERCK & CO INC
* 34	00869	3331	5	US METALS REFINING CO
34	01251	3563	5	INGERSOLL-RAND CO
34	04537	3581	5	ROWE INTERNATIONAL INC
34	04823	2032	5	CAMPBELL SOUP CO
* 34	05529	5681	5	FLEMINGTON FUR CO INC
34	06422	3263	5	LENOX INCORPORATED
34	06805	2841	5	COLGATE-PALMOLIVE CO
34	07246	5963	5	POPULAR MERCHANDISE CO INC
34	07399	4131	5	TRANSPORT OF NEW JERSEY
34	09840	8999	5	KWASHA LIPTON
34	10145	3652	5	C B S RECORDS
* 34	12252	5451	5	CUMBERLAND FARMS
34	14388	2645	5	INT'L BUS MACHINES CORP
34	20098	2386	5	SCHOTT BROTHERS
34	22057	5631	5	CONSTON OF NEW JERSEY INC
34	22299	5431	5	ORCHARD MARKETS INC
34	22571	2893	5	INMONT CORPORATION
34	23966	2865	5	AMERICAN CYANAMID COMPANY
34	24213	7374	5	A T T INFORMATION SYSTEMS
* 34	24354	5641	5	CHILDREN'S PLACE
* 34	24366	4811	5	AMERICAN TELEPH & TELEGR CO
* 34	24387	2098	5	C F MUELLER COMPANY
* 34	25941	3299	5	CERTECH INCORPORATED
35	00475	1061	6	UNION OIL CO CALIF
* 35	02182	1021	6	HELPS DODGE CORP
35	02411	7391	2	LOS ALAMOS SCIENTIFIC LAB U
36	00026	3142	5	DANIEL GREEN CO
36	00240	4811	5	NEW YORK TELEPHONE CO
36	00430	3644	5	CROUSE HINDS CO
36	00480	3629	5	GENERAL ELECTRIC CO
36	00631	3313	5	COLT INDUSTRIES OPER CORP
* 36	01844	2066	5	THE NESTLE CO INC

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
36	01845	2098	5	RONZONI MACARONI CO INC
36	02289	3563	5	INGERSOLL-RAND CO
36	02798	3851	5	BAUSCH & LOMB INC
36	03420	3592	5	GENERAL MOTORS CORP
36	08362	1031	5	ST JOE MINERALS CORP
36	08838	7351	5	THE HEARST CORP
36	10536	2062	5	AMSTAR CORPORATION
36	11138	3861	5	EASTMAN KODAK CO
36	13039	2822	5	GENERAL ELECTRIC CO
36	13093	3142	5	WOLVERINE WORLD WIDE INC
36	15245	4111	3	NEW YORK CITY TRANSIT
36	15246	4111	3	NYC TRANSIT AUTHORITY
36	15343	6513	3	NEW YORK CITY
36	15362	6025	5	THE CHASE MANHATTAN BANK
36	15402	9224	3	NYC FIRE DEPT
36	21359	3572	5	S C M CORPORATION
36	21728	7922	5	METROPOLITAN OPERA
36	22803	4833	5	NATL BROADCASTING CO INC
36	23546	4931	5	CONSOLIDATED ED CO OF NY IN
36	23963	3229	5	CORNING GLASS WORKS
36	26423	8211	3	NYC SCHOOL DIST-REGULAR FAC
* 36	26425	8211	3	NEW YORK CITY SCHOOL DISTRI
36	35056	6732	5	THE FORD FOUNDATION
36	52741	2812	5	ALLIED CHEMICAL CORP
36	60421	8211	3	NEW YORK CITY SCHOOL DISTRI
36	62522	6231	5	NEW YORK STOCK EXCHANGE INC
36	64740	7396	5	SPERRY & HUTCHNSN CO INC TH
36	64850	2816	5	CIBA GEIGY CORP
36	65039	9121	3	NASSAU COUNTY
36	65558	6011	5	NEW YORK FEDERAL RESERVE BA
36	69912	9221	3	NYC POLICE DEPT
* 36	71027	4811	5	AT&T COMMUNICATIONS-MAN
36	71138	3511	5	GENERAL ELECTRIC CO
36	71149	6025	5	CITIBANK
36	71900	6211	5	MERRILL LYNCH INC
36	74245	4953	3	NYC DEPT OF SANITATION
36	74333	3861	5	XEROX CORP
36	76099	9121	3	SUFFOLK COUNTY
36	78690	9441	3	NYC DEPT OF SOCIAL SERVICES
36	78875	3721	5	GRUMMAN AEROSPACE CORP
36	91160	6281	5	THE DEPOSITORY TRUST CO
36	91287	3914	5	ONEIDA LTD
36	91347	3674	5	INTERNATIONAL BUSINESS MACH
36	91349	3573	5	INTERNATIONAL BUSINESS MACH
36	91451	6022	5	CHEMICAL BANK

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State Code	Report Number	SIC	Owner- Ship	Establishment Name
36	93686	6022	5	MANUFACTURERS HANOVER TRUST
36	95133	7351	5	T V DATA INC-NYS EES
36	95134	7351	5	UNITED FEATURE SYNDICATE IN
36	96071	8411	5	THE METROPOLITAN MUSEUM OF
* 36	97564	8069	5	MEMORIAL HOSP FOR CANCER &
* 37	00177	2211	5	CANNON MILLS
37	00273	2296	5	FIRESTONE FIBERS & TEXTILE
37	00791	2323	5	REMINGTON APPAREL CORP
37	01121	2251	5	HANES CORP HANES HOSIERY DV
37	03544	3676	5	TRW RESISTIVE PRODUCTS
37	03957	9621	2	N C DEPT OF TRANSPORTATION
37	04540	3648	5	GE LIGHTING BUSINESS GROUP
37	04655	2284	5	AMERICAN THREAD CO SEVIER P
37	04686	2284	5	THREADS INC
* 37	05394	1411	5	VVL CAN MATERIALS CO MIDEAST
* 37	06113	8221	2	NC STATE UNIV AT RALEIGH
* 37	06553	2269	5	NATIONAL SPINNING CO INC DY
37	06962	3021	5	CONVERSE RUBBER CO CAROLINA
37	09289	8221	2	N C UNIVERSITY OF
37	09942	3339	5	TELEDYNE ALLVAC
37	11026	2387	5	MUTUAL INDUSTRIES
37	11434	3692	5	UNION CARBIDE CONSMR PROD 2
* 37	11497	2254	5	SPENCERS INC OF MT AIRY N C
37	12218	2258	5	GUILFORD MILLS INC
37	12769	5271	5	OAKWOOD MOBILE HOMES, INC
37	12844	2381	5	CAROLINA GLOVE CO
37	13096	2111	5	REYNOLDS RJ CIGARETTE
37	13130	2363	5	BUNN MFG
37	13348	2363	5	K & R SPORTSWEAR INC
* 37	13892	3586	5	GILBARCO INC
* 39	00093	3489	5	MONSANTO RESEARCH CORP
39	00137	3623	5	HOBART BROS CO
* 39	00207	3357	5	G M C PACKARD ELEC 1 & 3 TH
39	00213	3635	5	HOOVER CO
39	00305	3751	5	HUFFY
39	00790	3633	5	WHIRLPOOL CORP CLYDE DIV
39	01313	2032	5	CAMPBELL SOUP CO
39	01744	3582	5	AMERICAN LAUNDRY MACHINERY
39	05528	2023	5	ABBOTT LABORATORIES ROSS LA
39	05661	2771	5	AMERICAN GREETING PUBLISHER
39	05889	3537	5	CROWN CONTROLS CORP
* 39	08445	3316	5	THOMAS STEEL STRIP CORPORAT
39	08482	3299	5	GE CO WILLOUGHBY QUARTZ PLT
39	08576	3534	5	SCHINDLER HAUGHTON ELEVATOR
39	09309	3647	5	MIDLAND ROSS CORP
39	09351	3339	5	BRUSH WELLMAN INC

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39	10668	3647	5	FORD MOTOR CO SANDUSKY PLT
39	10776	3011	5	GOODYEAR TIRE & RUBBER
39	10874	3633	5	WHIRLPOOL CORP
39	13213	2295	5	BORDEN INC COATED FABRICS D
39	15991	2899	5	LUBRIZOL CORP
39	16596	3547	5	WEAN UNITED INC PLANT 1
39	16704	3724	5	GE CO AIRCRAFT ENGINE GROUP
39	17126	8211	3	CLEVELAND CITY SCHOOL DISTR
39	17325	3574	5	NCR CORP
39	17555	8221	2	OHIO STATE UNIV
39	17563	9441	2	OHIO STATE EXCEPT EDUCATION
39	17992	3574	5	NCR CORP CORPORATE PAYROLL
39	18651	3296	5	OWENS CORNING FIBERGLAS COR
39	19783	2875	5	SCOTT O M & SONS CO INC
39	19804	6711	5	AMERICAN ELECTRIC POWER SER
39	20909	3795	5	GENERAL DYNAMICS
39	20978	3623	5	LINCOLN ELECTRIC CO CLEVELA
* 39	22143	5431	5	FRONTIER FRUIT & NUT CO
39	23359	3296	5	OWENS CORNING FIBERGLAS COR
40	04639	5399	5	WAL-MART STORES INC
40	04685	4582	5	NORTHROP CORPORATION
* 40	05011	3211	5	TULSA GLASS PLANT
40	05877	9441	2	DEPT OF INST SOC & REHAB SE
41	02127	3339	5	WAH CHANG CORPORATION ALBAN
41	04880	3324	5	PRECISION CASTPARTS CORP
41	06206	3825	5	TEKTRONIX INC
* 41	06974	4231	5	GEORGIA PACIFIC - OUT PORT
42	01194	2121	5	AMER BRANDS INC CIGAR DIV
42	01854	3996	5	ARMSTRONG WORLD INDS INC
42	02467	3253	5	AMER OLEAN TILE CO
42	10008	3624	5	STACKPOLE CARBON CO
42	10107	3399	5	KEYSTONE CARBON CO INC
42	11631	3843	5	DENTSPLY INTERNATIONAL INC
42	11692	2066	5	HERSHEY FOODS CORP
42	11911	8221	5	PENNA UNIV OF
42	12099	9131	3	PHILA CITY GOVT
42	12240	3743	5	GENERAL ELECTRIC CO
42	12762	8221	5	PITTSBURGH UNIV OF
* 42	12917	8221	5	TEMPLE UNIVERSITY
42	13389	3547	5	WHITE CONSOLIDATED IND INC
42	13465	8211	3	PHILA CITY SCHOOL DIST
42	14336	2389	5	PARIS NECKWEAR CO INC
42	14991	1111	5	JEDDO HIGHLAND COAL CO
42	15114	1111	5	READING ANTHRACITE CO
42	19582	2121	5	CONSOLIDATED CIGAR CORP
42	22663	3751	5	HARLEY DAVIDSON INC
42	24651	3333	5	ST JOE RESOURCES CO

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	42	25856	3678 5	DU PONT E I DE NEMOUR CO IN
*	42	25965	2017 5	LONGACRE HORACE W INC
	42	26384	2492 5	MASONITE CORP
*	42	33296	3536 5	JLG INDUSTRIES INC
*	42	35239	4811 5	BELL TELEPHONE CO OF PA
	42	37379	3829 5	AMETEK INC
	42	37520	1111 5	BETHLEHEM MINES CORP
	42	37649	3262 5	ANCHOR HOCKING CORP
	42	37742	8221 2	PENNA STATE UNIV
	42	37860	1111 5	KOCHER COAL CO
	42	39258	3769 5	GENERAL ELECTRIC CO
*	42	41961	2647 5	PROCTOR & GAM PAPER PROD CO
	42	50163	3952 5	BINNEY SMITH INC
	42	51480	3493 5	SANDVIK INC
	42	51620	3532 5	JOY MFG CO
	42	52413	3795 5	HARSCO CORP BOWEN MCLAUGHL
	42	52423	2121 5	CULBRO CORP
	42	52623	2813 5	AIR PRODUCTS & CHEMICALS IN
	44	00227	3915 5	BALLOU B A & CO INC
	44	00251	3914 5	GORHAM CORPORATION
	44	00387	3161 5	AMERICAN TOURISTER CO
	44	00506	3961 5	TRIFARI KRUSSMAN & FISH
	44	02305	3951 5	CROSS A T CO
	44	02452	3915 5	JEWEL CO OF AMERICA INC
*	44	02849	3731 5	ELECTRIC BOAT DIVISION
*	44	02953	3172 5	INTERNATL PACKAGING CORP
	45	00732	2823 5	CELANESE CORP OF AMER
	45	01636	2655 5	SONOCO PRODUCTS CO
	45	01929	2395 5	EMB-TEX CORP
	45	02120	2294 5	WELLMAN INDUSTRIES INC
	45	02422	3675 5	AVX CERAMICS CORP MYRTLE B
*	45	02922	2294 5	LEIGH FIBERS INC
*	45	04317	3524 5	ROPER CORP
	45	04660	2611 5	BOWATERS CAROLINA CORP
*	45	04680	3576 5	TOLEDO SCALES INC
	45	05065	2262 5	SPRINGS MILLS INC DYEING
*	45	05784	2389 5	JOSTENS INC
	45	07892	3341 5	NASSAU RECYCLE CORPORATION
*	45	07924	5963 5	ELECTROLUX CORPORATION
	46	00305	1041 5	HOMESTAKE MINING CO
	46	04025	6153 5	CITIBANK
	47	00036	2824 5	TENNESSEE EASTMAN CO
	47	00042	2819 5	UNION CARBIDE CORP UN CRB N
	47	00168	3731 5	NASHVILLE BRIDGE CO
	47	00257	3331 5	TENNESSEE CHEMICAL CO

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47	00467	2254	5	STANDARD KNITTING
47	00874	7221	5	OLAN MILLS INC OF TENN
47	00959	1031	5	ASARCO INC TENNESSEE MINES
47	02237	8211	3	MEMPHIS CITY SCHOOL DIST
47	02632	9199	2	TENNESSEE DEPT OF PERSONNEL
47	03278	3211	5	NASHVILLE GLASS PLANT
47	03675	2517	5	N.A.P. CONSUMER ELECT CORP
47	04406	3581	5	CAVALIER CORP
47	04636	2816	5	DUPONT E I DE NEMOURS
47	04882	3952	5	FABER CASTELL CORP
47	05223	3995	5	BATESVILLE CASKET CO INC
47	05298	2732	5	KINGSPORT PRESS INC
47	06068	2322	5	ROBINSON MFG CO
47	06629	3952	5	EMPIRE PENCIL CORP
* 47	06728	3333	5	JERSEY MINIERE ZINC CO
47	07078	2823	5	NORTH AMERICA RAYON CORP
47	07148	3751	5	MURRAY OHIO MFG CO
* 47	08963	2385	5	LONDONTOWN CORP
* 47	09457	3483	5	MARTIN MARIETTA
48	00365	3332	5	ASARCO INC
48	00518	3533	5	CAMERON IRON WORKS INC
* 48	00641	2865	5	MONSANTO CO
48	01520	2095	5	GENERAL FOOD CORP-MAXWELL H
* 48	01775	2879	5	DUPONT E I DE NEMOURS & CO
48	02996	2062	5	IMPERIAL SUGAR CO
* 48	03420	9223	2	TEXAS DEPT OF CORRECTIONS
48	03469	8211	3	DALLAS INDEPENDENT SCHOOL D
48	03470	1611	2	ST DEPT OF HIGHWAYS & PUBLI
48	03550	8221	2	TEXAS UNIV OF
48	03576	8321	2	TX DEPT OF HUMAN RESOURCES
48	03594	9131	3	DALLAS CITY GOVT
48	03629	8211	3	HOUSTON INDEPENDNT SCH DIST
48	04809	3721	5	GENERAL DYNAMICS CORP FT WO
* 48	05465	3761	5	VOUGHT CORP
48	06903	9199	3	CITY OF HOUSTON
48	10603	3339	5	DOW CHEMICAL CO
48	13015	3674	5	TEXAS INSTRUMENTS INC
48	13484	7395	5	FOX-STANLEY PHOTO PROD INC
48	14915	5075	5	T D INDUSTRIES INC
48	15615	2387	5	T.A.B. MEN'S ACCESSORIES
48	15728	3555	5	INTERNATL BUS MACHINES CORP
48	16099	3331	5	ASARCO INC
48	16368	2061	5	RIO GRND VLY SUGAR GRWR INC
48	16623	5261	5	WOLFE NURSERIES INC
48	16627	3582	5	WASHEX MACHINERY CORP

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48	17353	1321	5	CHEVRON USA INC
48	18427	1321	5	PERRY GAS COMPANIES INC
48	19990	8221	2	TEXAS A&M UNIVERSITY SYSTEM
48	20051	5311	5	WAL-MART STORES INC
48	24075	4811	5	SOUTHWESTERN BELL TEL CO
48	24361	2517	5	HARVEY INDUSTRIES INC
* 48	28215	5999	5	AT & T INFORMATION SYSTEMS
* 48	30070	3261	5	KOHLER CO-BROWNWOOD
* 48	30239	2099	5	FRITO-LAY INC
* 48	31263	4411	5	EXXON SHIPPING COMPANY
* 48	31608	2911	5	GULF OIL CORPORATION (GR &
* 48	31656	5699	5	MILLERS OUTPOST
* 48	32011	3579	5	XEROX CORPORATION
* 48	32623	5271	5	KEY MOBILE HOME PARK
* 48	32644	6059	5	ASSOCIATES CORPORATION OF N
49	00076	3331	5	KENNECOTT COPPER CORP UTAH
49	00595	1021	5	KENNECOTT COPPER CO
49	01759	8221	5	BRIGHAM YOUNG UNIVERSITY
49	04053	3911	5	O C TANNER INC
* 49	04757	6059	5	THE AMERICAN EXPRESS CO
50	02745	3829	5	SIMMONDS PRECISION PROTS IN
51	00312	2823	5	AVTEX FIBERS
51	00313	2823	5	CELANESE FIBERS CORP CELCO
51	00370	2892	5	HERCULES INC
* 51	01971	4742	5	FRUIT GROWERS EXPRSS CO
51	01979	3731	5	NEWPORT NEWS SHPBLD & DRY D
51	10322	2754	5	MEREDITH-BURDA INC
* 51	12069	2111	5	PHILIP MORRIS & CO. LTD.
* 51	12301	5732	5	EROLS INC
* 51	15710	8211	3	FAIRFAX CO SCH BRD
* 51	15711	8211	3	FAIRFAX CO SCH BRD
51	15718	2253	5	BASSETT WALKER INC
51	17555	8411	5	COL WMSBURG FOUNDTN MUSEUMS
53	00194	3731	6	TODD SHIPYARDS
53	00251	3721	5	BOEING COMPANY
53	03367	3731	6	LOCKHEED SHIPBUILDING & CON
53	08925	4521	6	CASCADE AIRWAYS INC
53	10070	8221	2	UNIVERSITY OF WASHINGTON
53	11837	7369	6	PAN AM WORLD AIRWAYS INC
54	00013	2812	6	P P G INDUSTRIES INC
54	00056	3263	6	HOMER LAUGHLIN CHINA CO
54	02662	3581	6	DIXIE NARCO INC
54	03868	3547	5	BLAW KNOX CO FOUNDRY MILL W
55	00096	3622	5	ALLEN BRADLEY CO

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55	00096	3622	5	ALLEN BRADLEY CO
55	00113	3623	6	MILLER ELEC MFG CO
55	00425	3731	6	BAY SHIPBUILDING CORP
55	00426	3731	6	PETERSON BLDRS INC
55	00649	3462	5	LADISH CO
55	00721	3519	6	BRIGGS & STRATTON CORP
55	00914	2842	6	JOHNSON S C & SON
* 55	00988	3532	5	BUCYRUS ERIE CO
* 55	01053	3751	5	HARLEY DAVIDSON MOTOR C
55	03470	3693	5	GE CO MEDICAL SYSTEMS BUS D
55	04601	3566	6	FALK CORP THE
55	05545	8211	3	MILWAUKEE CITY SCHOOL DIST
55	05563	3172	5	AMITY LEATHER PRODUCTS
55	07433	2082	5	MILLER BREWING CO
55	09684	2591	5	GRABER MFG DIVISION
55	09727	8221	2	UW - DANE
* 55	10423	5271	6	STEENBERG MOBILE HOMES INC
55	10744	3431	5	KOHLER COMPANY ENAMELED DV
* 55	10745	3431	5	KOHLER COMPANY GEN OFFICE
55	10762	3951	5	PARKER PEN CO THE
* 55	10888	6351	5	MORTGAGE GUARANTY INSURANCE
55	10891	3554	6	BELOIT CORP
* 55	11671	2021	5	LEVEL VALLEY DAIRY CO
* 55	12155	2021	5	ROYS SANITARY DAIRY
* 55	12542	3731	5	MARINETTE MARINE

APPENDIX E: IDENTIFICATION CODES AND DEFINITIONS FOR STATE AND AREA SERIES

Table of Contents

- E.1 State and Area Codes and For CES Series
- E.2 Master List of Series Codes for Publishing State and Area Statistics in the CES Program
- E.3 Calculation of the Check Digit

STATE AND AREA FIPS CODES FOR CES SERIES

This appendix lists the State/area FIPS codes for CES State and area Series. Statewide is designated by "0000", and all areas which are not approved MSAs are noted by a "1" in the fourth position of the area code. These codes must be used on all transmittals to BLS-Washington, both on schedules and in machine-readable form.

01	ALABAMA
1000	BIRMINGHAM
3440	HUNTSVILLE
5160	MOBILE
5240	MONTGOMERY
8600	TUSCALOOSA
02	ALASKA
04	ARIZONA
6200	PHOENIX
8520	TUCSON
05	ARKANSAS
2580	FAYETTEVILLE-SPRINGDALE
2720	FORT SMITH
4400	LITTLE ROCK-NORTH LITTLE ROCK
6240	PINE BLUFF
06	CALIFORNIA
0360	ANAHEIM-SANTA ANA
0680	BAKERSFIELD
2840	FRESNO
4480	LOS ANGELES-LONG BEACH
5170	MODESTO
5775	OAKLAND
6000	OXNARD-VENTURA
6780	RIVERSIDE-SAN BERNARDINO
6920	SACRAMENTO
7120	SALINAS-SEASIDE-MONTEREY
7320	SAN DIEGO
7360	SAN FRANCISCO
7400	SAN JOSE
7480	SANTA BARBARA-SANTA MARIA-LOMPOC
7500	SANTA ROSA-PETALUMA
8120	STOCKTON
8720	VALLEJO-FAIRFIELD-NAPA
08	COLORADO
1125	BOULDER-LONGMONT
2080	DENVER-BOULDER
09	CONNECTICUT
1160	BRIDGEPORT-MILFORD
3280	HARTFORD
5440	NEW BRITAIN
5480	NEW HAVEN-MERIDEN
8040	STAMFORD
8880	WATERBURY

10	DELAWARE
9160	WILMINGTON
11	DISTRICT OF COLUMBIA
8840	WASHINGTON MSA
12	FLORIDA
1140	BRADENTON 1/
2020	DAYTONA BEACH
2630	FORT LAUDERDALE-HOLLYWOOD-POMPANO BEACH
2700	FORT MYERS-CAPE CORAL
2900	GAINESVILLE
3600	JACKSONVILLE
3980	LAKELAND-WINTER HAVEN
4900	MELBOURNE-TITUSVILLE-PALM BAY
5000	MIAMI-HIALEAH
5960	ORLANDO
6015	PANAMA CITY 1/
6080	PENSACOLA
7510	SARASOTA
8240	TALLAHASSEE
8280	TAMPA-ST. PETERSBURG-CLEARWATER
8960	WEST PALM BEACH-BOCA RATON-DELRAY BEACH
13	GEORGIA
0120	ALBANY
0500	ATHENS
0520	ATLANTA
0600	AUGUSTA
1800	COLUMBUS
4680	MACON-WARNER ROBINS
7520	SAVANNAH
15	HAWAII
3320	HONOLULU
16	IDAHO
1080	BOISE CITY
17	ILLINOIS
0620	AUROURA-ELGIN
1040	BLOOMINGTON-NORMAL
1400	CHAMPAIGN-URBANA-RANTOUL
1591	CHICAGO-GARY 1/
1600	CHICAGO
1960	DAVENPORT-ROCK ISLAND-MOLINE
2040	DECATUR
3690	JOLIET
3740	KANKAKEE
3965	LAKE COUNTY
6120	PEORIA
6880	ROCKFORD
7880	SPRINGFIELD

18	INDIANA
0400	ANDERSON
2330	ELKHART-GOSHEN
2440	EVANSVILLE
2760	FORT WAYNE
2960	GARY-HAMMOND
3480	INDIANAPOLIS
3920	LAFAYETTE
5280	MUNCIE
7800	SOUTH BEND-MISHAWAKA
8320	TERRE HAUTE
19	IOWA
1360	CEDAR RAPIDS
2120	DES MOINES
2200	DUBUQUE
3500	IOWA CITY
7720	SIOUX CITY
8920	WATERLOO-CEDAR FALLS
20	KANSAS
4150	LAWRENCE
8440	TOPEKA
9040	WICHITA
21	KENTUCKY
4280	LEXINGTON-FAYETTE
4520	LOUISVILLE
5990	OWENSBORO
22	LOUISIANA
0220	ALEXANDRIA
0760	BATON ROUGE
3350	HOUMA-THIBODAUX
3880	LAFAYETTE
3960	LAKE CHARLES
5200	MONROE
5560	NEW ORLEANS
7680	SHREVEPORT
23	MAINE
4240	LEWISTON-AUBURN
6400	PORTLAND
24	MARYLAND
0720	BALTIMORE MSA
0721	BALTIMORE CITY
8125	SUBURBAN MARYLAND-DC
25	MASSACHUSETTS
1120	BOSTON
1200	BROCKTON
2480	FALL RIVER
2600	FITCHBURG-LEOMINSTER
4160	LAWRENCE-HAVERHILL
4560	LOWELL
5400	NEW BEDFORD

	6320	PITTSFIELD
	8000	SPRINGFIELD
	9240	WORCESTER
26		MICHIGAN
	0440	ANN ARBOR
	0780	BATTLE CREEK
	0800	BAY CITY 1/
	0870	BENTON HARBOR
	2160	DETROIT
	2640	FLINT
	3000	GRAND RAPIDS
	3520	JACKSON
	3720	KALAMAZOO
	4040	LANSING-EAST LANSING
	5320	MUSKEGON
	6960	SAGINAW-BAY CITY-MIDLAND
27		MINNESOTA
	2240	DULUTH
	5120	MINNEAPOLIS-ST. PAUL
	6820	ROCHESTER
	6980	ST. CLOUD
28		MISSISSIPPI
	3560	JACKSON
29		MISSOURI
	3760	KANSAS CITY
	7000	ST. JOSEPH
	7040	ST. LOUIS
	7920	SPRINGFIELD
30		MONTANA
	0880	BILLINGS
	3040	GREAT FALLS
31		NEBRASKA
	4360	LINCOLN
	5920	OMAHA
32		NEVADA
	4120	LAS VEGAS
	6720	RENO
33		NEW HAMPSHIRE
	4760	MANCHESTER
	5350	NASHUA
34		NEW JERSEY
	0560	ATLANTIC CITY
	0875	BERGEN-PASSAIC
	1311	CAMDEN
	3181	HACKENSACK 2/
	3640	JERSEY CITY

	4410	LONG BRANCH-ASBURY PARK 1/
	5015	MIDDLESEX-SOMERSET-HUNTERDON
	5190	MONMOUTH-OCEAN
	5460	NEW BRUNSWICK-PERTH AMBOY-SAYREVILLE 1/
	5640	NEWARK
	8480	TRENTON
	8760	VINELAND-MILLVILLE-BRIDGETON
35		NEW MEXICO
	0200	ALBUQUERQUE
	4100	LAS CRUCES
36		NEW YORK
	0160	ALBANY-SCHENECTADY-TROY
	0960	BINGHAMTON
	1280	BUFFALO
	1281	BUFFALO-NIAGARA CMSA 2/
	2335	ELMIRA
	2975	GLENS FALLS
	5231	MONROE COUNTY
	5380	NASSAU-SUFFOLK
	5581	NEW YORK-NORTHEASTERN NEW JERSEY 1/
	5591	NEW YORK AND NASSAU-SUFFOLK 2/
	5600	NEW YORK PMSA
	5611	NEW YORK CITY
	5612	BOROUGH OF THE BRONX
	5613	BOROUGH OF BROOKLYN
	5614	BOROUGH OF MANHATTAN
	5616	BOROUGH OF QUEENS
	5617	BOROUGH OF STATEN ISLAND
	5660	NEWBURGH-MIDDLETON 1/
	5700	NIAGARA FALLS PMSA
	5950	ORANGE COUNTY
	6460	POUGHKEEPSIE
	6561	PUTNAM COUNTY 2/
	6840	ROCHESTER
	6901	ROCKLAND COUNTY
	8160	SYRACUSE
	8680	UTICA-ROME
	8971	WESTCHESTER COUNTY
37		NORTH CAROLINA
	0480	ASHEVILLE
	1520	CHARLOTTE-GASTONIA-ROCK HILL
	3120	GREENSBORO-WINSTON-SALEM-HIGH PT
	6640	RALEIGH-DURHAM
38		NORTH DAKOTA
	1010	BISMARCK
	2520	FARGO-MOORHEAD
	2985	GRAND FORKS
39		OHIO
	0080	AKRON

	1320	CANTON
	1640	CINCINNATI
	1680	CLEVELAND
	1840	COLUMBUS
	2000	DAYTON-SPRINGFIELD
	8400	TOLEDO
	9320	YOUNGSTOWN-WARREN
40		OKLAHOMA
	2340	ENID
	4200	LAWTON
	5880	OKLAHOMA CITY
	8560	TULSA
41		OREGON
	2400	EUGENE-SPRINGFIELD
	4890	MEDFORD
	6440	PORTLAND
	7080	SALEM
42		PENNSYLVANIA
	0240	ALLENTOWN-BETHLEHEM
	0280	ALTOONA
	0845	BEAVER COUNTY
	2051	DELAWARE VALLEY
	2360	ERIE
	3240	HARRISBURG-LEBANON-CARLISLE
	3680	JOHNSTOWN
	4000	LANCASTER
	5745	NORTHEAST PENNSYLVANIA 1/
	6160	PHILADELPHIA PMSA
	6161	PHILADELPHIA CITY
	6280	PITTSBURGH
	6680	READING
	7560	SCRANTON--WILKES-BARRE
	7561	SCRANTON 1/
	7610	SHARON
	8050	STATE COLLEGE
	9121	WILKES-BARRE--HAZLETON 1/
	9140	WILLIAMSPORT
	9280	YORK
43		PUERTO RICO
	1310	CAGUAS
	4840	MAYAGUEZ
	6360	PONCE
	7440	SAN JUAN
44		RHODE ISLAND
	6060	PAWTUCKET-WOONSOCKET-ATTLEBORO
	6480	PROVIDENCE

45	SOUTH CAROLINA
1440	CHARLESTON
1760	COLUMBIA
3160	GREENVILLE-SPARTANBURG
46	SOUTH DAKOTA
6660	RAPID CITY 1/
7760	SIOUX FALLS
47	TENNESSEE
1560	CHATTANOOGA
3660	JOHNSON CITY-KINGSPORT-BRISTOL
3840	KNOXVILLE
4920	MEMPHIS
5360	NASHVILLE
48	TEXAS
0040	ABILENE
0320	AMARILLO
0640	AUSTIN
0840	BEAUMONT-PORT ARTHUR
1145	BRAZORIA
1240	BROWNSVILLE-HARLINGEN
1260	BRYAN-COLLEGE STATION
1880	CORPUS CHRISTI
1920	DALLAS
2320	EL PASO
2800	FORT WORTH-ARLINGTON
2920	GALVESTON-TEXAS CITY
3360	HOUSTON
3810	KILLEEN-TEMPLE
4080	LAREDO
4420	LONGVIEW-MARSHALL
4600	LUBBOCK
4880	MCALLEN-EDINBURG-MISSION
5040	MIDLAND
5800	ODESSA
7200	SAN ANGELO
7240	SAN ANTONIO
7640	SHERMAN-DENISON
8360	TEXARKANA
8640	TYLER
8750	VICTORIA
8800	WACO
9080	WICHITA FALLS
49	UTAH
6520	PROVO-OREM
7160	SALT LAKE CITY-OGDEN
50	VERMONT
1305	BURLINGTON
7971	SPRINGFIELD

51	VIRGINIA
1181	BRISTOL
1540	CHARLOTTESVILLE
1950	DANVILLE
4640	LYNCHBURG
5680	NEWPORT NEWS-HAMPTON 1/
5720	NORFOLK-VIRGINIA BEACH-NEWPORT NEWS
5751	NORTHERN VIRGINIA
6140	PETERSBURG-COLONIAL HGTS-HOPEWELL 1/
6760	RICHMOND-PETERSBURG
6800	ROANOKE
52	VIRGIN ISLANDS
53	WASHINGTON
7600	SEATTLE
7840	SPOKANE
8200	TACOMA
54	WEST VIRGINIA
1480	CHARLESTON
3400	HUNTINGTON-ASHLAND
6020	PARKERSBURG-MARIETTA
9000	WHEELING
55	WISCONSIN
0460	APPLETON-OSHKOSH-NEENAH
2290	EAU CLAIRE
3080	GREEN BAY
3620	JANESVILLE-BELOIT
3800	KENOSHA
3870	LA CROSSE
4720	MADISON
5080	MILWAUKEE
6600	RACINE
7620	SHEBOYGAN
8940	WAUSAU
56	WYOMING
1350	CASPER
1571	CHEYENNE

- 1/ Due to changes in the official OMB metropolitan area definitions estimates are no longer accepted in CES and are not published by BLS-Washington except on LABSTAT.
- 2/ Estimates are accepted by CES but are not published by BLS-Washington except on LABSTAT.

"MASTER" LIST OF SERIES CODES

NOTE: The series codes are based upon the 1972 SIC Manual and are six-digit figures. The first digit designates the division level. The next four digits relate to the SIC or SIC combination and the last digit shown is reserved for the ownership affiliation status code.

DIVISION

0=TOTAL
1=MINING
2=CONSTRUCTION
3=MANUFACTURING-DURABLES
4=MANUFACTURING-NONDUR.
5=T. P. U.
6=TRADE
7=F. I. R. E.
8=SERVICES
9=GOVERNMENT

OWNERSHIP

0=TOTAL PRIVATE AND GOVERNMENT
1=FEDERAL GOVERNMENT
2=STATE GOVERNMENT
3=LOCAL GOVERNMENT
4=INTERNATIONAL OR FOREIGN GOVERNMENT 1/
5=PRIVATE SECTOR
6=COUNTY GOVERNMENT
7=CITY GOVERNMENT
8=TOTAL GOVERNMENT
9=TOTAL STATE AND LOCAL GOVERNMENT

LAST UPDATED: 8-25-1983

SERIES TITLEVALID SIC'S

000000 TOTAL NONAGRICULTURAL EMPLOYMENT	074, 075, 078, 10-14, 15-17 20-39, 40-49, 50-59, 60-67, 70, 72, 73, 75, 76, 78-84, 86, 89, 91-97 & 99
000035 TOTAL PRIVATE	074, 075, 078, 10-14, 15-17 20-39, 40-42, 44-49, 50-59, 60-67, 70, 72, 73, 75, 76, 78- 84, 86, 89 & 99
000060 TOTAL NONMANUFACTURING	074, 075, 078, 10-14, 15-17 40-49, 50-59, 60-67, 70, 72, 73, 75, 76, 78-84, 86, 89, 91- 97 & 99
000065 TOTAL PRIVATE NONMANUFACTURING	074, 075, 078, 10-14, 15-17, 40-42, 44-49, 50-59, 60-67, 70, 72, 73, 75, 76, 78-84, 86, 89 & 99
100005 MINING	10-14
110005 METAL MINING	10
110045 METAL AND BITUMINOUS COAL MINING, AND NON-METALLIC MINERALS, EXC. FUELS	10, 12 & 14
110205 COPPER ORES	102
111005 ANTHRACITE MINING	11
112005 BITUMINOUS COAL AND LIGNITE MINING	12
112045 BITUMINOUS COAL MINING AND OIL AND GAS EXTRACTION	12 & 13
112055 BITUMINOUS COAL, QUARRYING, AND NONMETALLIC MINING (EXC. FUELS)	12 & 14
113005 OIL AND GAS EXTRACTION	13

113125	CRUDE PETROLEUM, NATURAL GAS, AND NATURAL GAS LIQUIDS	131 & 132
113805	OIL AND GAS FIELD SERVICES	138
113995	OTHER OIL AND GAS EXTRACTION	----
114005	NONMETALLIC MINERALS (EXC. FUELS)	14
114755	PHOSPHATE ROCK	1475
114975	OTHER MINING AND QUARRYING	----
200005	CONSTRUCTION	15-17
200015	CONSTRUCTION AND MINING	4/ 10-14 & 15-17
215005	GENERAL BUILDING CONTRACTORS	15
215205	GENERAL BUILDING CONTRACTORS - RESIDENTIAL BUILDINGS	152
215235	GENERAL BUILDING CONTRACTORS - RESIDENTIAL, OPERATIVE BUILDERS	152 & 153
215305	OPERATIVE BUILDERS	153
215405	GENERAL BUILDING CONTRACTORS - NON- RESIDENTIAL BUILDINGS	154
216005	HEAVY CONSTRUCTION CONTRACTORS	16
216105	HIGHWAY AND STREET CONSTRUCTION	161
216205	HEAVY CONSTRUCTION, EXC. HIGHWAY	162
217005	SPECIAL TRADE CONTRACTORS	17
217105	PLUMBING, HEATING, AND AIR CONDITIONING	171
217205	PAINTING, PAPER HANGING, AND DECORATING	172
217305	ELECTRICAL WORK	173
217405	MASONRY, STONework, AND PLASTERING	174
217505	CARPENTERING AND FLOORING	175
217605	ROOFING AND SHEET METAL WORK	176
217705	CONCRETE WORK	177
217985	OTHER SPECIAL TRADE CONTRACTORS	----
217995	SPECIAL TRADE CONTRACTORS, EXC. PLUMBING, HEATING, AIR CONDITIONING, ELECTRICAL WORK, AND MASONRY, STONework, AND PLASTERING	172 & 175-179
300005	MANUFACTURING	20-39
300025	DURABLE GOODS	24, 25 & 32-39
300035	DURABLE GOODS 2/	24, 25 & 32-38
300055	METALLIC MANUFACTURING	2/ 33-38, 391, 394 & 396
300085	MANUFACTURING EXCLUDING LUMBER	20-39 (EXC. 24)
324005	LUMBER AND WOOD PRODUCTS	24
324015	LUMBER AND FURNITURE	24 & 25
324025	LUMBER, FURNITURE, AND PAPER PRODUCTS	24-26
324035	LUMBER AND STONE, CLAY, AND GLASS PRODUCTS	24 & 32
324045	LUMBER AND PAPER PRODUCTS	24 & 26
324105	LOGGING CAMPS AND LOGGING CONTRACTORS	241
324195	LOGGING CAMPS, SAWMILLS, AND PLANING MILLS	241 & 242
324205	SAWMILLS AND PLANING MILLS	242

324305 MILLWORK, PLYWOOD, AND STRUCTURAL MEMBERS	243
324375 HARDWOOD AND SOFTWOOD VENEER AND PLYWOOD	2435 & 2436
324385 MILLWORK AND STRUCTURAL WOOD MEMBERS	243 (EXC. 2435 & 2436)
324405 WOOD CONTAINERS	244
324495 WOOD CONTAINERS AND MISCELLANEOUS WOOD PRODUCTS	244 & 249
324505 WOOD BUILDINGS AND MOBILE HOMES	245
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325005 FURNITURE AND FIXTURES	25
325105 HOUSEHOLD FURNITURE	251
325115 WOOD HOUSEHOLD FURNITURE	2511
325125 UPHOLSTERED HOUSEHOLD FURNITURE	2512
325135 HOUSEHOLD AND OFFICE FURNITURE	251 & 252
325145 HOUSEHOLD, OFFICE AND PUBLIC BUILDING FURNITURE	251, 252, & 253
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325205 OFFICE FURNITURE	252
325305 PUBLIC BUILDING FURNITURE	253
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325975 OTHER FURNITURE AND FIXTURES	----
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332195 GLASS AND GLASS PRODUCTS	321-323
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332295 PRESSED AND BLOWN GLASS, NEC	3229
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332705 CONCRETE, GYPSUM, AND PLASTER PRODUCTS	327
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333015 PRIMARY AND FABRICATED METALS	33 & 34
333055 PRIMARY METALS, FABRICATED METALS, AND MACHINERY	33-36
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333195	BLAST FURNACES, IRON AND STEEL FOUNDRIES, AND MISC. PRIMARY METALS	331, 332 & 339
333205	IRON AND STEEL FOUNDRIES	332
333215	GRAY IRON FOUNDRIES	3321
333255	STEEL FOUNDRIES, NEC	3325
333295	MALLEABLE IRON AND STEEL INVESTMENT FOUNDRIES	3322 & 3324
333305	PRIMARY NONFERROUS METALS	333
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334045	FABRICATED METAL PRODUCTS AND TRANSPORTATION EQUIPMENT	34 & 37
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334685	METAL FORGINGS AND STAMPINGS, EXC. IRON AND STEEL FORGINGS	346 (EXC. 3462)
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335015 MACHINERY	35 & 36
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889005	MISCELLANEOUS SERVICES	89
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889305	ACCOUNTING, AUDITING AND BOOKKEEPING SERVICES	893
889975	SERVICES, EXC. HEALTH SERVICES	074, 075, 078, 70, 72, 73, 75, 76, 78, 79, 81-84, 86 & 89
889985	SERVICES, EXC. HEALTH SERVICES, AND MINING	074, 075, 078, 10-14, 70, 72, 73, 75, 76, 78, 79, 81-84, 86 & 89
889995	OTHER MISCELLANEOUS SERVICES	----
891785	OTHER SERVICES AND NEC	----
891975	OTHER SERVICES	----
891985	OTHER SERVICES AND MINING	----
895085	AGRICULTURAL SERVICES	074, 075 & 078
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979979	OTHER STATE AND LOCAL GOVERNMENT	----
992972	OTHER STATE GOVERNMENT	----
993973	OTHER LOCAL GOVERNMENT	----
994998	OTHER GOVERNMENT	----
998008	TOTAL GOVERNMENT	----
998011	TOTAL FEDERAL GOVERNMENT	----
998101	U S DEPARTMENT OF DEFENSE	----
998111	U S AIR FORCE	----
998121	U S ARMY	----
998131	U S NAVY	----
998201	FEDERAL GOVERNMENT, EXC. US POST OFFICE AND HOSPITALS	----
998401	OTHER FEDERAL	----
998509	TOTAL STATE AND LOCAL GOVERNMENT	----
998512	TOTAL STATE GOVERNMENT	----
998523	TOTAL LOCAL GOVERNMENT	----
998537	TOTAL CITY GOVERNMENT	----
998546	TOTAL COUNTY GOVERNMENT	----
998558	DISTRICT OF COLUMBIA GOVERNMENT	----
999930	CONSTRUCTION, FINANCE, GOVERNMENT, AND MISC. NONMANUFACTURING	----
999950	OTHER NONMANUFACTURING	----

- 1/ The ownership code "4" is also used to designate a "State specific" series code. The "State specific" codes are used for SIC combinations which are limited to use in one State only. The SIC combinations are unique for that State and there is no need for a standard code. These series are unpublished and no title is assigned.
- 2/ Series code will no longer be accepted for current estimates for statewide series effective with the implementation of the March 1983 benchmark in February 1984. Area series and comparable historical series for both States and areas will no longer be accepted effective with the implementation of the March 1984 benchmark in February 1985.
- 3/ Series codes 800065, 800075 and 999930 will no longer be accepted for current estimates for statewide or area series effective with the implementation of the March 1983 benchmark in February 1984.
- 4/ Series codes 200015 and 800055 will no longer be accepted for statewide series effective with the implementation of the 1983 benchmark. Area series using 800055 will no longer be accepted effective with the implementation of the 1984 benchmark. Historical series will no longer be accepted as of February 1985.
- 5/ Series code 800095 will no longer be accepted for current or historical statewide or area estimates effective with the March 1983 benchmark.

APPENDIX E.3: CALCULATION OF THE CHECK DIGIT

A self checking number is one that has a precalculated digit appended to the basic control number for the purpose of catching keyentry or transcription errors.

A Modulus 10 method is used to calculate check digits in the CES State and Area system. To calculate the check digit begin with the State/area/series control codes:

FIPS STATE CODE (2 digits)	:	11
FIPS AREA CODE (4 digits)	:	8840
APPROPRIATE SERIES CODE (6 DIGITS)	:	499995

This creates a 12-digit control code: 1 1 8 8 4 0 4 9 9 9 9 5

- | | |
|---|---|
| 1. Starting with the furthest right digit, select every alternate digit of the State/area/Series Codes. | State/Area/Series Code
1 1 8 8 4 0 4 9 9 9 9 5 |
| 2. Add each digit together. | 1 + 8 + 0 + 9 + 9 + 5 = 32 |
| 3. Multiply the sum of step 2 by 2. | 32
<u>x2</u>
64 |
| 4. Select and add the remaining digits (Those that were not multiplied by 2). | 1 + 8 + 4 + 4 + 9 + 9 = 35 |
| 5. Add the sum of steps 3 and 4 above. | 64 + 35 = 99 |
| 6. Subtract the total in step (5) from the next higher number ending in zero. | 100 - 99 = 1 |
| 7. The difference is the check digit. | 1 |

APPENDIX F: EDITING THE BLS 790 SCHEDULE

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- F.1 Conversion Factors and L/P Codes for Converting Weekly
Equivalents
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APPENDIX F.1: CONVERSION FACTORS AND L/P CODES FOR CONVERTING TO WEEKLY EQUIVALENTS

Manual Reference: Section 6.3.6-C

(Use As Hundredths For Conversion Factors; As Whole Numbers For L/P Codes)

DAYS WORKED BY MAJORITY OF PRO- DUCTION WORKERS DURING PAY PERIOD REPORTED	DAYS WORKED BY MAJORITY OF PRODUCTION WORKERS DURING 7-CONSECUTIVE-DAY PERIOD WHICH INCLUDES THE 12TH													
	.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7
.5	X	--	--	--	--	--	--	--	--	--	--	--	--	--
1	50	X	--	--	--	--	--	--	--	--	--	--	--	--
1.5	33	67	X	--	--	--	--	--	--	--	--	--	--	--
2	25	50	75	X	--	--	--	--	--	--	--	--	--	--
2.5	20	40	60	80	X	--	--	--	--	--	--	--	--	--
3	17	33	50	67	83	X	--	--	--	--	--	--	--	--
3.5	14	29	43	57	71	80	X	--	--	--	--	--	--	--
4	13	25	38	50	63	75	88	X	--	--	--	--	--	--
4.5	11	22	33	44	56	67	78	89	X	--	--	--	--	--
5	10	20	30	40	50	60	70	80	90	X	--	--	--	--
5.5	09	18	27	36	45	55	64	73	82	91	X	--	--	--
6	08	17	25	33	42	50	58	67	75	83	92	X	--	--
6.5	08	15	23	31	38	46	54	62	69	77	85	92	X	--
7	07	14	21	29	36	43	50	57	64	71	79	86	93	X
7.5	07	13	20	27	33	40	47	53	60	67	73	80	87	93
8	06	13	19	25	31	38	44	50	56	63	69	75	81	86
8.5	06	12	18	24	29	35	41	47	53	59	65	71	76	82
9	06	11	17	22	26	33	39	44	50	56	61	67	72	78
9.5	05	11	16	21	26	32	37	42	47	53	58	63	68	74
10	05	10	15	20	25	30	35	40	45	50	55	60	65	70
10.5	05	10	14	19	24	29	33	38	43	48	52	57	62	67
11	05	09	14	18	23	27	32	36	41	45	50	55	59	64
11.5	04	09	13	17	22	26	30	35	39	43	48	52	57	61
12	04	08	13	17	21	25	29	33	38	42	46	50	54	58
12.5	04	07	12	16	20	24	28	32	36	40	44	48	52	56
13	04	08	12	15	19	23	27	31	35	38	42	46	50	54
13.5	04	07	11	15	19	22	26	30	33	37	41	44	48	52
14	04	07	11	14	18	21	25	29	32	36	39	43	46	50
14.5	03	07	10	14	17	21	24	28	31	34	38	41	45	48
15	03	07	10	13	17	20	23	27	30	33	37	40	43	47

Manual Reference: Section 6.3.6-C

[illegible]

APPENDIX F.2: COMMENT CODES

Reference: Sections 6.3.9; 7.3.5

SECTION 1 - ECONOMIC COMMENTS

GENERAL BUSINESS-----

- 01 Seasonal increase; seasonal reopening; hiring of nonfaculty full-time or part-time personnel at beginning of the school year.
- 02 Seasonal downturn; seasonal closing; layoff of nonfaculty school personnel at the end of the school term.
- 03 More business (other than seasonal); new orders; new contracts.
- 04 Less business (other than seasonal); contracts completed, nearing completion or cancelled; lack of orders.

STRIKES-----

- 05 Strike.
- 06 Strike over and wage increase.
- 07 Complete or partial shutdown or layoff because of secondary effects of strike (curtailment in supplies or customer demand).

OTHER CLOSINGS-----

- 08 Complete or partial shutdown or layoff because of fire, flood, storm, unfavorable weather, or other accidents or natural phenomena.
- 09 Complete or partial shutdown or layoff for retooling in connection with model or product change or other conversion of facilities.
- 10 Complete or partial temporary shutdown or layoff.
NOTE: Do not use this code when reason for shutdown is listed above.
- 11 Permanent or long-term shutdown or closing.

REOPENINGS-----	12	Reopening or return to normal after events coded 05, 07-11.
SUMMER EMPLOYMENT-----	13	Substitute or temporary summer help (students, etc.).
	14	Quits to return to school.
OVERTIME-----	15	Overtime worked at premium pay (includes daily and weekend work).
	16	Overtime worked without premium pay.
	17	Less overtime worked at premium pay.
HOLIDAYS/VACATIONS-----	18	Majority worked on a paid holiday at premium rates.
	19	Majority worked on a paid holiday at straight-time rates.
	20	Majority on unpaid holiday, or vacation without pay.
	21	Majority worked and received vacation pay.
	22	Majority on paid vacation.
	23	Return to normal after codes 18-22.
WAGE RATE CHANGE-----	24	Wage rate increase, including cost-of-living adjustments.
	25	Wage rate decrease, including cost-of-living adjustments.
LENGTH OF WORKWEEK-----	26	Longer scheduled workweek.
	27	Shorter scheduled workweek.

SECTION 2 - ACTIVITY COMMENTS

EMPLOYMENT-----

- 30 Extra force hired for specific job or occurrences not listed in codes 1 or 3.
- 31 End of specific job (coded 30) for which extra force was hired.
- 32 Replacement of men with machines; reorganizations; automation.
- 33 Change in employment due to interplant transfers.
- 34 Addition of department, plant, or store.
- 35 Closing of department, plant, or store.

REGULAR BONUS
PAYMENTS-----

- 40 Higher hourly earnings because of piece work or higher incentive pay.
- 41 Lower hourly earnings because of piece work or lower incentive pay.
- 42 Change in hourly earnings because of change in amount of shift work with pay differential.
- 43 Change in commissions.

OTHER CHANGES
IN AWH OR AHE-----

- 44 Higher average hours and earnings because part-time employee laid off.
- 45 Lower average hours and earnings because part-time employees were hired.
- 46 Return to normal after use of codes 40-45.
- 47 Change in hours and/or earnings due to labor legislation or administrative regulations.
- 48 Increase in proportion of higher paid employees.
- 49 Increase in proportion of lower paid employees.

EFFECTS OF
ENERGY AVAILABILITY
AND SEVERE WEATHER
CONDITIONS-----

- 50 Activity curtailed due to inability to obtain a sufficient supply of natural gas.
- 51 Activity curtailed due to inability to obtain a sufficient supply of fuel oil.
- 52 Activity curtailed due to inability to obtain a sufficient supply of coal.
- 53 Activity curtailed due to inability to obtain a sufficient supply of electricity.

- 54 Activity curtailed due to inability to obtain raw materials due to suppliers being affected by energy shortages or weather conditions.
- 55 Activity curtailed due to frozen or damaged facilities because of weather conditions.
- 56 Activity curtailed due to inability of employees or suppliers to reach facility because of weather and/or road conditions.
- 57 Activity curtailed due to executive order to reduce fuel consumption or hours of operation.
- 59 Returned to normal after events coded 50-57.

SPECIAL STATE
ASSIGNED CODES-----

- 61 through 89.

SECTION 3 - OPERATING COMMENTS -- for microdata only

REPORTING-----

- 90 First month of operation of newly established business; first month of operation at new location reported by multistate construction firms.
- 91 First month data sent for new reporter.
- 92 First month data sent under changed report number.
- 93 First month data sent under changed industry code.
- 94 Series break for State/area estimates -- data prior to this time period are not comparable.

VERIFICATION-----
(May be assigned
by Regional Office
for State/area
estimates)

- 95 Figures verified by respondent.
- 96 Data used pending verification.
- 97 Respondent refuses to verify or does not answer request for verification.

MISCELLANEOUS-----

- 99 For Washington use only (interpolation-extrapolation).

APPENDIX G: SAMPLING TABLES

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- G.1 Sampling Ratios for Current Employment Statistics Program
Sample, By Industry By Establishment Size Class
- G.2 Table of Random Starting Numbers
- G.3 Selection Pattern for Specified Sampling Fractions
- G.4 State and Area Sampling Formulas

APPENDIX G.1: SAMPLING RATIOS FOR CURRENT EMPLOYMENT STATISTICS PROGRAM
SAMPLE, BY INDUSTRY BY ESTABLISHMENT SIZE CLASS

Manual Reference: Section 3

This table lists denominators of ratios. Numerators are 1 (for example, 75 means 1/75) unless otherwise specified (for example, 3/5).

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Agricultural Services:						
074	75	20	10	1	1	1
075	100	20	9	4	3/5	1
078	100	20	9	4	2	1
Mining:						
101	0	0	0	0	2	1
102	0	0	0	0	2	1
103	0	0	0	0	2/3	1
104	0	0	0	1	1	1
105	0	0	1	1	1	1
106	0	0	0	0	1	1
108	100	10	5	2/3	1	1
109	0	0	3	2	2/3	1
111	0	0	4	1	1	1
121	50	20	8	4	2/3	1
131	100	20	8	4	2/3	1
132	0	0	4	2	2/3	1
138	100	20	8	4	2	1
141	0	10	4	2	1	1
142	75	20	8	4	3/5	1
144	75	20	8	4	2	1
145	0	0	8	3	2	1
147	0	0	4	2	3/4	1
148	0	7	3	1	1	1
149	0	0	8	3	3/4	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Contract						
Construction:						
152	100	20	5	2	1	1
153	100	20	4	2	1	1
154	100	20	5	2	1	1
161	100	20	4	2	1	1
162	100	20	5	2	1	1
171	100	20	5	2	1	1
172	100	20	4	1	1	1
173	100	20	5	2	1	1
174	100	20	5	2/3	1	1
175	100	20	4	1	1	1
176	100	20	4	1	1	1
177	100	20	4	1	1	1
178	100	20	1	1	1	1
179	100	20	5	2	1	1

Industry	Size Class - Sampling Ratio					250 and over
	0-9	10-19	20-49	50-99	100-249	
Manufacturing:						
2011	50	20	8	4	2/3	1
2013	50	15	8	4	2/3	1
2016	0	0	6	3	3/4	1
2017	0	0	8	4	3/5	1
2021	0	0	8	4	1	1
2022	50	20	8	4	2/3	1
2023	0	0	8	4	3/5	1
2024	0	15	9	4	3/5	1
2026	50	15	8	4	3/5	1
2032	0	0	8	3	2/3	1
2033	50	15	8	3	2/3	1
2034	0	0	8	3	3/4	1
2035	50	15	7	3	2/3	1
2037	0	0	6	3	3/4	1
2038	0	0	8	3	3/4	1
2041	50	15	8	3	3/5	1
2043	0	0	0	0	1	1
2044	0	0	0	2	1	1
2045	0	0	8	3	2/3	1
2046	0	0	0	0	1	1
2047	0	0	8	4	2/3	1
2048	50	20	8	4	3/5	1
2051	50	15	8	3	2/3	1
2052	0	0	7	3	1	1
2061	0	0	5	3	1	1
2062	0	0	0	0	1	1
2063	0	0	0	3	3/4	1
2065	50	15	8	4	2/3	1
2066	0	0	0	3	1	1
2067	0	0	0	0	0	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing -						
Continued:						
2074	0	0	7	3	2/3	1
2075	0	0	0	4	2	1
2076	0	0	0	3	1	1
2077	0	15	8	4	2/3	1
2079	0	0	0	3	3/4	1
2082	0	0	0	2	1	1
2083	0	0	3	2	1	1
2084	0	0	6	3	2/3	1
2085	0	0	7	3	3/4	1
2086	50	15	8	4	2/3	1
2087	0	20	7	4	2/3	1
2091	0	20	9	3	2/3	1
2092	0	15	8	4	2/3	1
2095	0	0	7	3	3/4	1
2097	75	10	6	2	1	1
2098	0	0	6	3	2/3	1
2099	50	20	8	4	2/3	1
2111	0	0	0	0	0	1
2121	0	0	5	3	1	1
2131	0	0	0	0	1	1
2141	0	0	0	0	3/4	1
2211	0	0	5	2	1	1
2221	0	0	6	3	3/4	1
2231	0	0	8	4	2/3	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
2241	0	15	8	4	2/3	1
2251	0	0	7	3	3/4	1
2252	0	15	10	3	2/3	1
2253	50	15	8	3	2/3	1
2254	0	0	0	3	3/4	1
2257	0	10	7	3	3/4	1
2258	0	10	7	3	2/3	1
2259	0	0	0	2	1	1
2261	0	0	7	3	3/4	1
2262	0	0	8	3	2/3	1
2269	0	0	8	3	2/3	1
2271	0	0	4	2	2	1
2272	0	15	8	3	2/3	1
2279	0	0	3	1	1	1
2281	0	0	6	3	3/4	1
2282	0	0	7	3	3/4	1
2283	0	0	8	3	2/3	1
2284	0	0	0	0	1	1
2291	0	0	0	2	1	1
2292	0	0	4	2	1	1
2293	0	0	7	3	1	1
2294	0	0	7	3	1	1
2295	0	0	6	3	2/3	1
2296	0	0	0	0	1	1
2297	0	0	0	2	1	1
2298	0	0	8	3	3/4	1
2299	0	0	7	2	2	1
2311	50	15	7	3	3/4	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
2321	0	15	6	3	2/3	1
2322	0	0	0	2	3/4	1
2323	0	10	8	3	2/3	1
2327	0	0	7	3	3/4	1
2328	0	0	7	3	3/4	1
2329	0	15	8	3	2/3	1
2331	0	20	8	4	2/3	1
2335	75	20	8	4	3/5	1
2337	75	20	8	4	3/5	1
2339	75	15	8	4	2/3	1
2341	0	15	7	3	2/3	1
2342	0	0	6	3	2/3	1
2351	0	0	6	2	1	1
2352	0	0	6	3	1	1
2361	0	15	8	4	2/3	1
2363	0	0	8	4	3/5	1
2369	0	15	7	4	2/3	1
2371	75	10	5	1	1	1
2381	0	0	8	3	2/3	1
2384	0	0	8	4	2/3	1
2385	0	15	8	4	2/3	1
2386	0	0	8	3	2/3	1
2387	0	10	7	4	1	1
2389	0	0	6	3	1	1
2391	75	20	8	3	2/3	1
2392	75	15	8	3	3/5	1
2393	0	15	6	3	2/3	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
2394	75	20	9	4	3/5	1
2395	75	20	8	4	2/3	1
2396	50	20	8	4	3/5	1
2397	50	10	8	2	1	1
2399	50	15	7	3	2/3	1
2411	100	20	9	4	2/3	1
2421	75	20	8	4	3/5	1
2426	75	20	8	4	2/3	1
2429	75	15	8	3	1	1
2431	75	15	8	4	3/5	1
2434	75	15	9	4	2/3	1
2435	0	0	7	3	2/3	1
2436	0	0	7	3	3/4	1
2439	50	15	8	3	1	1
2441	50	20	8	3	2/3	1
2448	50	20	8	4	2/3	1
2449	0	15	8	4	2/3	1
2451	0	20	7	4	3/5	1
2452	100	15	9	4	3/5	1
2491	0	20	9	3	2/3	1
2492	0	0	5	2	2/3	1
2499	75	20	8	4	2/3	1
2511	75	15	8	3	2/3	1
2512	50	15	7	4	2/3	1
2514	50	15	8	3	2/3	1
2515	50	20	8	4	2/3	1
2517	0	0	0	3	2/3	1
2519	0	10	4	2/3	1	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
2521	0	0	8	3	2/3	1
2522	0	0	7	3	2/3	1
2531	0	15	7	3	2/3	1
2541	75	20	8	4	2	1
2542	0	20	8	4	2/3	1
2591	75	15	7	3	1	1
2599	0	15	8	3	2/3	1
2611	0	0	0	0	1	1
2621	0	0	5	3	1	1
2631	0	0	6	3	3/4	1
2641	0	15	6	3	3/4	1
2642	0	0	7	3	2/3	1
2643	0	15	7	3	2/3	1
2645	0	20	8	4	2/3	1
2646	0	0	4	3	1	1
2647	0	0	6	3	1	1
2648	0	0	6	3	1	1
2649	0	15	8	4	2/3	1
2651	0	20	8	3	3/5	1
2652	0	15	8	4	2/3	1
2653	0	20	8	3/10	3/5	1
2654	0	0	8	3	2/3	1
2655	0	0	8	4	2/3	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
2661	0	0	0	3	3/4	1
2711	50	20	8	4	2/3	1
2721	75	20	8	4	2/3	1
2731	75	15	7	3	2/3	1
2732	0	0	7	3	3/4	1
2741	75	20	8	4	2/3	1
2751	75	20	9	4	3/5	1
2752	75	20	8	4	3/5	1
2753	75	20	8	4	2/3	1
2754	0	0	0	3	1	1
2761	0	15	7	3	2/3	1
2771	0	0	7	3	3/4	1
2782	0	15	8	3	2/3	1
2789	50	20	8	4	2/3	1
2791	75	20	8	4	2	1
2793	50	20	8	4	1	1
2794	0	0	3	1	1	1
2795	50	15	7	2	1	1
2812	0	0	0	0	2	1
2813	0	15	7	4	2/3	1
2816	0	0	8	3	1	1
2819	50	20	7	3	3/4	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
2821	0	20	7	3	2/3	1
2822	0	0	0	0	1	1
2823	0	0	0	0	2/3	1
2824	0	0	0	0	3/4	1
2831	0	0	8	3	3/4	1
2833	0	0	0	3	2/3	1
2834	75	15	7	3	3/4	1
2841	75	15	7	4	2/3	1
2842	75	15	8	4	2/3	1
2843	0	0	8	3	1	1
2844	75	15	7	3	3/4	1
2851	50	15	8	4	2/3	1
2861	0	0	8	2	1	1
2865	0	0	7	3	3/4	1
2869	0	0	7	3	2/3	1
2873	0	0	7	3	2/3	1
2874	0	0	7	3	3/4	1
2875	50	20	8	4	2	1
2879	0	15	7	3	2/3	1
2891	50	15	8	4	3/5	1
2892	0	0	6	3	1	1
2893	50	20	8	4	2	1
2895	0	0	0	3	1	1
2899	50	15	7	4	2/3	1
2911	0	0	6	2	3/4	1

Industry	Size Class - Sampling Ratio					250 and over
	0-9	10-19	20-49	50-99	100-249	
Manufacturing - Continued:						
2951	50	20	8	4	2/3	1
2952	0	0	8	3	2/3	1
2992	0	20	8	3	3/4	1
2999	0	0	0	0	1	1
3011	0	0	6	3	3/4	1
3021	0	0	0	0	1	1
3031	0	0	1	1	1	1
3041	0	0	7	4	2/3	1
3069	50	15	8	3	2/3	1
3079	75	15	8	4	3/5	1
3111	50	20	7	3	2/3	1
3131	0	20	8	4	2/3	1
3142	0	0	7	3	3/4	1
3143	0	0	4	2	1	1
3144	0	0	4	3	1	1
3149	0	0	6	3	2/3	1
3151	0	0	8	3	1	1
3161	0	15	8	3	3/5	1
3171	0	15	8	3	3/5	1
3172	0	0	8	3	3/5	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3199	75	15	8	3	1	1
3211	0	0	0	0	1	1
3221	0	0	0	0	2	1
3229	0	15	6	3	3/4	1
3231	75	20	8	4	3/4	1
3241	0	0	6	3	2/3	1
3251	0	20	7	4	3/5	1
3253	0	0	0	3	3/4	1
3255	0	0	7	3	2/3	1
3259	0	0	9	4	2/3	1
3261	0	0	0	3	3/4	1
3262	0	0	0	0	0	1
3263	0	0	0	0	0	1
3264	0	0	0	3	2/3	1
3269	75	20	8	3	3/5	1
3271	50	20	9	4	2	1
3272	75	20	8	4	3/5	1
3273	75	20	9	4	3/5	1
3274	0	0	7	3	3/5	1
3275	0	0	6	3	3/5	1
3281	75	20	8	4	3/5	1
3291	0	15	8	3	3/4	1
3292	0	0	6	3	3/4	1
3293	0	15	8	3	2/3	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3295	0	15	8	3	3/5	1
3296	0	0	9	3	2/3	1
3297	0	0	6	3	1	1
3299	75	20	8	3	2/3	1
3312	0	0	6	3	1	1
3313	0	0	0	0	3/4	1
3315	0	0	6	3	3/4	1
3316	0	0	7	3	3/4	1
3317	0	0	7	3	3/4	1
3321	0	15	7	3	2/3	1
3322	0	0	0	0	1	1
3324	0	0	0	3	1	1
3325	0	0	6	3	1	1
3331	0	0	0	0	1	1
3332	0	0	0	0	0	1
3333	0	0	0	0	0	1
3334	0	0	0	0	0	1
3339	0	0	0	3	1	1
3341	0	20	7	4	2/3	1
3351	0	0	6	3	3/4	1
3353	0	0	0	0	3/4	1
3354	0	0	7	3	2/3	1
3355	0	0	0	0	1	1
3356	0	0	7	3	1	1
3357	0	0	2	3/4	1	1
3361	50	20	8	4	3/5	1
3362	75	20	8	4	3/5	1
3369	50	20	7	4	2	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3398	50	20	7	4	2	1
3399	0	15	8	4	3/5	1
3411	0	0	7	3	3/4	1
3412	0	0	6	4	2/3	1
3421	0	0	6	3	3/5	1
3423	75	15	7	3	3/4	1
3425	0	0	6	3	3/5	1
3429	75	15	7	4	2/3	1
3431	0	0	7	4	3/5	1
3432	0	0	8	3	3/5	1
3433	0	15	6	3	3/4	1
3441	50	15	8	4	2/3	1
3442	50	15	8	4	3/5	1
3443	50	20	7	4	2/3	1
3444	75	20	8	4	3/5	1
3446	75	20	8	4	3/5	1
3448	75	15	8	3	2/3	1
3449	0	15	8	3	2/3	1
3451	50	20	8	4	2	1
3452	50	15	7	3	2/3	1
3462	0	15	7	3	2/3	1
3463	0	0	0	0	1	1
3465	0	15	7	3	2/3	1
3466	0	0	0	2	1	1
3469	50	15	8	3	3/5	1
3471	75	20	9	4	3/5	1
3479	75	20	9	4	3/5	1

Industry	Size Class - Sampling Ratio					250 and over
	0-9	10-19	20-49	50-99	100-249	
Manufacturing - Continued:						
3482	0	0	0	0	0	1
3483	0	0	0	0	1	1
3484	0	0	5	3	1	1
3489	0	0	0	0	1	1
3493	0	0	8	4	3/4	1
3494	50	15	7	3	3/4	1
3495	0	15	7	4	3/5	1
3496	50	15	8	4	3/5	1
3497	0	0	4	3	1	1
3498	50	15	7	4	3/5	1
3499	50	20	8	4	3/5	1
3511	0	0	0	3	1	1
3519	0	0	7	4	3/4	1
3523	50	20	8	3	3/5	1
3524	0	0	6	3	1	1
3531	75	15	7	3	3/4	1
3532	0	0	7	3	3/4	1
3533	0	0	6	3	1	1
3534	0	0	7	4	3/5	1
3535	50	15	7	4	2/3	1
3536	0	15	7	3	3/5	1
3537	0	20	7	4	2/3	1
3541	50	15	8	3	2/3	1
3542	0	20	8	3	2/3	1
3544	50	20	9	4	3/5	1
3545	50	15	8	4	2/3	1
3546	0	0	0	3	1	1
3547	0	0	0	0	1	1
3549	0	0	8	3	3/4	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3551	50	20	8	4	2/3	1
3552	50	20	8	4	2/3	1
3553	0	20	8	3	2/3	1
3554	0	0	7	3	3/4	1
3555	50	20	7	4	2/3	1
3559	50	20	8	4	2/3	1
3561	0	15	7	3	3/4	1
3562	0	0	4	2	1	1
3563	0	0	7	3	2/3	1
3564	75	15	7	3	2/3	1
3565	75	15	6	2	1	1
3566	0	0	8	3	2/3	1
3567	0	15	8	3	2/3	1
3568	0	0	7	3	1	1
3569	75	15	8	4	3/5	1
3572	0	0	0	0	1	1
3573	75	15	7	3	3/4	1
3574	0	0	0	0	1	1
3576	0	0	4	3	2/3	1
3579	0	0	4	3	3/4	1
3581	0	0	0	4	1	1
3582	0	0	8	4	1	1
3585	75	15	7	3	2/3	1
3586	0	0	0	0	1	1
3589	75	20	8	3	3/5	1
3592	0	0	6	3	3/4	1
3599	75	20	9	4	3/5	1
3612	0	20	7	3	2/3	1
3613	75	15	7	3	3/4	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3621	0	15	7	3	3/4	1
3622	50	15	7	3	3/4	1
3623	0	0	7	3	2/3	1
3624	0	0	0	3	1	1
3629	0	0	0	0	0	0
3631	0	0	0	3	2/3	1
3632	0	0	0	0	1	1
3633	0	0	0	0	1	1
3634	0	0	5	3	1	1
3635	0	0	0	0	1	1
3636	0	0	0	0	1	1
3639	0	0	0	2	1	1
3641	0	0	7	3	3/4	1
3643	0	15	7	3	3/4	1
3644	0	0	7	3	3/4	1
3645	75	20	8	4	3/5	1
3646	0	0	8	3	3/4	1
3647	0	0	0	0	1	1
3648	0	0	6	2	3/4	1
3651	0	15	7	3	2/3	1
3652	75	15	8	3	3/5	1
3661	0	0	7	3	3/4	1
3662	50	15	7	3	2/3	1
3671	0	0	0	0	1	1
3672	0	0	0	0	1	1
3673	0	0	0	2	3/4	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3674	50	20	7	3	2/3	1
3675	0	0	8	3	3/4	1
3676	0	0	0	0	1	1
3677	0	15	7	3	2/3	1
3678	0	0	3	3	1	1
3679	50	15	7	3/10	2/3	1
3691	0	0	6	3	3/4	1
3692	0	0	0	0	1	1
3693	0	0	6	3	3/4	1
3694	0	15	7	3	3/4	1
3699	0	15	8	3	2/3	1
3711	0	15	7	3	2/3	1
3713	75	20	8	3	3/5	1
3714	50	15	7	3	3/4	1
3715	0	20	8	3	3/4	1
3721	0	0	6	3	1	1
3724	0	0	6	3	3/4	1
3728	50	15	8	3	2/3	1
3731	0	15	6	3	3/4	1
3732	75	20	8	3	3/5	1
3743	0	0	7	3	2/3	1
3751	0	0	8	4	1	1
3761	0	0	0	0	1	1
3764	0	0	0	0	1	1
3769	0	0	8	3	1	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3792	75	20	7	4	2/3	1
3795	0	0	0	0	1	1
3799	75	20	8	3	3/5	1
3811	50	15	7	3	3/4	1
3822	0	0	7	3	2/3	1
3823	0	15	7	3	3/4	1
3824	0	0	7	3	3/4	1
3825	60	15	7	3	2/3	1
3829	0	15	7	3	2/3	1
3832	75	20	7	4	2/3	1
3841	50	15	7	3	2/3	1
3842	50	20	7	3	2/3	1
3843	75	15	7	3	2/3	1
3851	50	20	8	4	2/3	1
3861	50	15	7	3	2/3	1
3873	0	0	7	3	2/3	1
3911	75	20	8	4	3/5	1
3914	0	0	8	3	2/3	1
3915	75	20	7	4	3/5	1
3931	50	15	7	3	2/3	1
3942	0	0	8	3	3/4	1
3944	75	15	7	3	2/3	1
3949	75	20	8	4	2/3	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Manufacturing - Continued:						
3951	0	0	6	3	2/3	1
3952	0	0	6	3	1	1
3953	75	15	8	4	3/4	1
3955	0	0	6	3	2/3	1
3961	75	20	8	4	2/3	1
3962	0	15	8	4	1	1
3963	50	15	8	3	3/4	1
3964	0	0	7	3	3/4	1
3991	75	15	6	4	2/3	1
3993	75	20	8	4	3/5	1
3995	50	15	7	4	2/3	1
3996	0	0	0	0	1	1
3999	75	20	8	4	3/5	1
Transportation, communication, electric, gas and sanitary services:						
40 ^{1/}	0	0	0	0	0	0
411	75	20	8	4	3/5	1
412	100	20	8	4	2/3	1
413	75	20	8	4	3/5	1
414	50	15	8	3	2/3	1
415	75	20	8	4	3/5	1
417	50	10	4	3/5	1	1
421	100	20	8	4	3/5	1
422	75	20	8	4	3/5	1
423	50	10	6	3	2/3	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Transportation, Communication, electric, gas and sanitary services - Continued:						
441	0	15	7	4	2/3	1
442	0	0	5	3	2/3	1
443	0	0	0	2	1	1
444	75	15	7	4	2/3	1
445	75	20	8	3	3/5	1
446	75	20	7	3	2/3	1
451	75	15	7	3	2/3	1
452	100	15	8	3	2/3	1
458	75	20	8	4	3/5	1
461	75	15	8	4	2/3	1
471	75	20	8	4	3/5	1
472	75	20	9	4	3/5	1
474	25	7	4	2	1	1
478	100	20	8	4	3/5	1
481	50	15	7	3	2/3	1
482	0	15	7	3	3/4	1
483	50	20	9	4	3/5	1
489	75	20	9	4	3/5	1
491	50	15	8	3	2/3	1
492	50	15	7	3	3/5	1
493	0	15	7	3	3/4	1
494	100	20	8	4	3/5	1
495	75	20	9	4	3/5	1
496	0	3	2	1	1	1
497	50	5	3	1	1	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Wholesale and retail trade:						
501	75	20	8	4	3/5	1
502	100	20	8	4	3/5	1
503	75	20	9	3	2/3	1
504	100	20	8	4	3/5	1
505	75	20	8	4	2/3	1
506	75	20	8	4	3/5	1
507	75	20	9	4	3/5	1
508	75	20	9	4	3/5	1
509	100	20	8	4	3/5	1
511	75	20	8	4	3/5	1
512	100	20	8	4	3/5	1
513	100	20	9	4	3/5	1
514	75	20	8	4	3/5	1
515	75	20	9	4	3/5	1
516	100	20	8	4	3/5	1
517	75	20	8	4	3/5	1
518	75	20	8	4	3/5	1
519	75	20	9	4	3/5	1
521	50	20	9	3	3/4	1
523	75	20	9	4	1	1
525	75	20	9	4	2	1
526	75	20	8	4	1	1
527	100	20	9	2	1	1
531	50	15	7	3	2/3	$\frac{2}{1}$
533	50	20	8	4	3/5	1
539	75	20	9	4	3/5	1
541	100	35	10	6	2	$\frac{2}{1}$
542	100	20	10	4	1	1
543	100	20	8	3	1	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Wholesale and retail trade - Continued:						
544	75	20	9	4	2	1
545	75	20	9	4	3/5	1
546	75	20	6	3/4	1	1
549	100	20	9	4	2/3	1
551	75	20	9	4	3/5	1
552	100	20	8	2	1	1
553	75	20	9	4	3/5	1
554	100	20	9	4	3/5	1
555	75	20	3	2	1	1
556	100	20	8	2	1	1
557	75	20	9	4	1	1
559	100	20	8	3	1	1
561	75	20	9	4	3/4	1
562	75	20	9	4	3/5	1
563	75	20	9	4	3/5	1
564	75	20	9	2	1	1
565	75	20	9	4	3/5	1
566	75	20	9	4	3/5	1
568	100	20	8	2	1	1
569	100	20	9	3	1	1
571	75	20	9	3	3/4	1
572	75	20	9	4	3/5	1
573	75	20	9	4	3/5	1
581	100	30	10	6	2	3/4
591	50	20	9	4	3/5	1
592	100	20	9	4	2/3	1
593	100	20	9	4	2/3	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Wholesale and retail trade - Continued:						
594	100	20	9	4	2/3	1
596	100	20	8	4	3/5	1
598	75	20	9	2/3	1	1
599	100	20	9	4	3/5	1
Finance, insurance, and real estate						
601	0	0	0	0	1	1
602	50	20	8	4	3/5	1
603	50	15	8	3	2/3	1
604	0	0	0	1	1	1
605	75	15	8	3	3/5	1
611	0	0	3	1	1	1
612	50	20	8	4	3/5	1
613	50	20	7	2/3	1	1
614	100	20	9	4	3/5	1
615	100	20	8	4	2/3	1
616	100	20	8	4	3/5	1
621	100	20	8	4	3/5	1
622	100	20	7	4	1	1
623	0	0	4	4	1	1
628	100	20	8	4	3/5	1
631	75	20	8	4	2/3	1
632	75	15	7	3	3/4	1
633	75	20	8	3	2/3	1
635	100	20	8	3	1	1
636	75	20	8	4	3/5	1
637	100	20	8	4	3/5	1
639	0	0	4	2	1	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Finance, insurance, and real estate - Continued:						
641	100	20	9	4	3/5	1
651	100	20	9	4	3/5	1
653	100	20	9	4	3/5	1
654	75	20	8	2	1	1
655	100	20	9	4	3/5	1
661	100	20	9	4	1	1
671	100	20	8	4	3/5	1
672	100	9	5	3	1	1
673	100	20	9	4	2	1
679	100	20	8	3	1	1
Services:						
701	100	20	8	4	3/5	1
702	100	20	8	4	3/5	1
703	100	20	8	4	1	1
704	100	15	7	3	2/3	1
721	100	20	9	4	3/5	1
722	100	20	9	4	2/3	1
723	100	20	9	4	3/4	1
724	100	15	4	2	1	1
725	100	10	4	1	1	1
726	75	20	8	2/3	1	1
729	75	20	8	4	3/5	1
731	100	20	8	4	3/5	1
732	75	20	8	4	3/5	1
733	100	20	9	4	3/5	1
734	100	20	8	4	2/3	1
735	100	20	6	3	1	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Services - Continued:						
736	100	20	8	3	3/5	1
737	75	20	8	4	3/5	1
739	100	20	8	4	3/5	1
751	100	20	8	4	3/5	1
752	75	20	8	4	3/5	1
753	100	20	9	4	1	1
754	75	20	5	1	1	1
762	100	20	9	4	3/5	1
763	100	20	4	2	1	1
764	100	20	8	2	1	1
769	100	20	9	4	3/5	1
781	100	20	8	4	3/5	1
782	100	20	8	4	1	1
783	50	20	9	4	3/5	1
791	75	20	9	3	1	1
792	100	20	8	4	3/5	1
793	75	20	7	3	1	1
794	100	15	8	3	2/3	1
799	100	20	8	4	3/5	1
801	100	30	12	4	3/5	1
802	100	20	4	2	1	1
803	100	20	5	1	1	1
804	100	20	8	4	3/5	1
805	75	20	10	5	2	1
806	50	15	5	2/5	2	2/3
807	100	20	8	4	3/5	1
808	75	20	8	4	3/5	1
809	75	20	8	4	2	1
811	100	20	9	4	3/5	1

Industry	Size Class - Sampling Ratio					
	0-9	10-19	20-49	50-99	100-249	250 and over
Services -						
Continued:						
821 ^{3/}	-	-	-	-	-	-
822	50	15	6	3	3/4	1
823	50	15	8	4	2/3	1
824	75	20	8	4	3/5	1
829	100	20	8	4	3/4	1
832	75	20	8	4	3/5	1
833	60	15	8	4	3/5	1
835	75	20	9	4	3/5	1
836	75	20	8	4	3/5	1
839	75	20	8	4	3/5	1
841	75	15	8	3	1	1
842	0	0	5	2	1	1
861	100	20	9	4	3/5	1
862	100	20	8	4	3/5	1
863	75	20	9	2/5	1	1
864	100	20	8	4	3/5	1
865	100	6	5	1	1	1
866 ^{3/}	-	-	-	-	-	-
869	100	20	8	4	2/3	1
891	100	20	8	4	3/5	1
892	75	20	8	4	3/5	1
893	100	20	8	4	3/5	1
899	100	20	9	4	2/3	1
99 ^{4/}	0	0	0	0	0	0

^{1/} Universe data collected by Interstate Commerce Commission.

^{2/} Use sampling ratios of 2/3 for size class 250-499, 3/4 for size class 500-999, 1 for size class 1,000 and over.

^{3/} No sample design, not covered or only partially covered by ES-202.

^{4/} No sample required for nonclassified establishments.

APPENDIX G.2: TABLE OF RANDOM STARTING NUMBERS

CES Manual Reference: Sec. 3.2.3

Sampling ratio ^{1/}	: Starting : number	: Sampling : ratio ^{1/}	: Starting : number	: Sampling : ratio ^{1/}	: Starting : number :
3	1	36	12	69	4
4	2	37	16	70	18
5	4	38	35	71	53
6	6	39	27	72	13
7	5	40	27	73	53
8	1	41	25	74	39
9	8	42	34	75	69
10	4	43	31	76	11
11	7	44	23	77	13
12	12	45	18	78	55
13	12	46	3	79	74
14	3	47	30	80	69
15	6	48	46	81	81
16	5	49	1	82	16
17	15	50	16	83	9
18	11	51	31	84	17
19	19	52	37	85	15
20	6	53	46	86	14
21	20	54	54	87	6
22	18	55	10	88	61
23	21	56	6	89	79
24	22	57	36	90	31
25	2	58	28	91	70
26	22	59	19	92	24
27	17	60	29	93	25
28	14	61	16	94	59
29	11	62	2	95	81
30	28	63	61	96	12
31	1	64	56	97	61
32	1	65	61	98	46
33	1	66	39	99	46
34	3	67	4	100	83
35	23	68	15		

^{1/} Denominators only are shown

For sampling ratio 1/2

Division	: Starting : number	: Division	: Starting : number
Mining	1	Wholesale and retail trade	2
Construction	1	Finance, insurance, and real estate	2
Manufacturing	1		
Transportation, communi- cation, electric, gas, and sanitary services	2	Services	1

APPENDIX G.3: SELECTION PATTERNS FOR SPECIFIED SAMPLING FRACTIONS

CES Manual Reference: Sec. 3.2.3

Sampling fraction	: Number : of establishments : in group	: : Establishments to be : selected
2/3	3	1st, 3rd
3/4	4	1st, 3rd, 4th
2/5	5	3rd, 4th
3/5	5	1st, 2nd, 3rd
3/10	10	2nd, 4th, 8th

APPENDIX G. 4: STATE AND AREA SAMPLING FORMULAS

CES Manual Reference: Sec. 3.2.3

Size of Nonag series	Industries Characterized by:	
	Large Establishments	Small Establishments
States/SMSA's 500,000 or more	$y = .868x_1 + 19.47$	$y = 76.37 - 1.938x_2 + .0132x_2^2$
State/SMSA's Less than 500,000	$y = .795x_1 + 26.49$	$y = 81.37 - 1.938x_2 + .0132x_2^2$

where y = percent employment sample coverage x_1 = percent of universe employment in largest
size class x_2 = percent of universe employment in
smallest size class

APPENDIX H: CLOSING DATES

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- H.1 Closing Dates -- CES Microdata
- H.2 State and Area Estimates Closing Dates
- H.3 Registry Cutoff Dates

APPENDIX H.1: CLOSING DATES FOR RECEIPT OF 1985 CES DATA

Manual Reference: Section 6.7.2

Closing Dates for Receipt in BLS-Washington of Individual BLS 790 Report Data for 1985 for National Tabulation:

Data Month 1985	First Closing	Second Closing	Third Closing
Jan.	Mon. 01-28-85	Fri. 02-15-85	Fri. 03-08-85
Feb.	Mon. 03-04-85	Fri. 03-22-85	Fri. 04-12-85
Mar.	Mon. 04-01-85	Fri. 04-19-85	Fri. 05-10-85
Apr.	Mon. 04-29-85	Fri. 05-17-85	Fri. 06-07-85
May.	Mon. 06-03-85	Fri. 06-21-85	Fri. 07-12-85
Jun.	Fri. 06-28-85 <u>1/</u>	Fri. 07-19-85	Fri. 08-09-85
Jul.	Mon. 07-29-85	Fri. 08-16-85	Fri. 09-06-85
Aug.	Fri. 08-30-85 <u>2/</u>	Fri. 09-20-85	Thu. 10-10-85 <u>3/</u>
Sep.	Mon. 09-30-85	Fri. 10-18-85	Thu. 11-07-85 <u>4/</u>
Oct.	Mon. 10-28-85	Fri. 11-15-85	Fri. 12-06-85
Nov.	Mon. 12-02-85	Wed. 12-18-85 <u>5/</u>	Fri. 01-10-86
Dec.	Tue. 12-31-85 <u>6/</u>	Fri. 01-17-86	Fri. 02-07-86

1/ June first closing: changed from Mon., 07-01-85 to Fri., 06-28-85 because of the observance of Independence Day on Thu., 07-04-85.

2/ August first closing: changed from Mon., 09-02-85 to Fri., 08-30-85 because of the observance of Labor Day on Mon., 09-02-85.

3/ August third closing: changed from Fri., 10-11-85 to Thu., 10-10-85 because of the observance of Columbus Day on Mon., 10-14-85.

4/ September third closing: changed from Fri., 11-08-85 to Thu., 11-07-85 because the observance of Veteran's Day on Mon., 11-11-85.

5/ November second closing: changed from Fri., 12-20-85 to Wed., 12-18-85 because of the observance of Christmas Day on Wed., 12-25-85.

6/ December first closing: changed from Fri., 12-27-85 to Tue., 12-31-85 because the Press release date has been moved to Wed., 01-08-86.



APPENDIX H.2: CLOSING DATES FOR RECEIPT OF 1986 CES STATE AND
AREA ESTIMATES

Manual Reference: Section 7.4

Closing Dates for the Receipt at BLS-Washington of the Monthly Estimates of Employment, Hours, and Earnings for 1986 and the Benchmark Revisions and Annual Averages for 1985.

<u>Data Month - 1986</u>	<u>Closing Date</u>
January	Wed. 02-26-86
February	Wed. 03-26-86
March	Wed. 04-23-86
April	Wed. 05-21-86
May	Wed. 06-25-86
June	Wed. 07-23-86
July	Wed. 08-20-86
August	Wed. 09-24-86
September	Wed. 10-22-86
October	Wed. 11-26-86
November	Wed. 12-24-86
December	Wed. 01-21-87

Switchover Month

January 1986

Annual Benchmark Revision
Closing Date

Fri., February 14, 1986

APPENDIX H. 3: REGISTRY CUTOFF DATES

Manual Reference: Section 5

CES registry cutoff dates for the receipt in BLS-Washington of deletions, additions, and changes to the CES National Registry File.

CES REGISTRY UPDATE PROCESSING DATES - 1985

Registry Updates Transmitted by COB on:		Will be reflected on CES closing:	
Day	Date	Closing	Day Date
WED	12-26-84	DEC 1st	FRI 12-28-84
WED	01-09-85	NOV 3rd	FRI 01-11-85
TUE	01-15-85	DEC 2nd	THU 01-17-85
WED	01-23-85	JAN 1st	MON 01-28-85
WED	02-06-85	DEC 3rd	FRI 02-08-85
WED	02-13-85	JAN 2nd	FRI 02-15-85
WED	02-27-85	FEB 1st	MON 03-04-85
WED	03-06-85	JAN 3rd	FRI 03-08-85
WED	03-20-85	FEB 2nd	FRI 03-22-85
WED	03-27-85	MAR 1st	MON 04-01-85
WED	04-10-85	FEB 3rd	FRI 04-12-85
WED	04-17-85	MAR 2nd	FRI 04-19-85
WED	04-24-85	APR 1st	MON 04-29-85
WED	05-08-85	MAR 3rd	FRI 05-10-85
WED	05-15-85	APR 2nd	FRI 05-17-85
WED	05-29-85	MAY 1st	MON 06-03-85
WED	06-05-85	APR 3rd	FRI 06-07-85
WED	06-19-85	MAY 2nd	FRI 06-21-85
WED	06-26-85	JUN 1st	FRI 06-28-85 1/
WED	07-10-85	MAY 3rd	FRI 07-12-85
WED	07-17-85	JUN 2nd	FRI 07-19-85
WED	07-24-85	JUL 1st	MON 07-29-85
WED	08-07-85	JUN 3rd	FRI 08-09-85
WED	08-14-85	JUL 2nd	FRI 08-16-85
WED	08-28-85	AUG 1st	FRI 08-30-85 2/
WED	09-04-85	JUL 3rd	FRI 09-06-85
WED	09-18-85	AUG 2nd	FRI 09-20-85
WED	09-25-85	SEP 1st	MON 09-30-85
TUE	10-08-85	AUG 3rd	THU 10-10-85 3/
WED	10-16-85	SEP 2nd	FRI 10-18-85
WED	10-23-85	OCT 1st	MON 10-28-85
TUE	11-05-85	SEP 3rd	THU 11-07-85 4/
WED	11-13-85	OCT 2nd	FRI 11-15-85
WED	11-27-85	NOV 1st	MON 12-02-85
WED	12-04-85	OCT 3rd	FRI 12-06-85
MON	12-16-85	NOV 2nd	WED 12-18-85 5/
MON	12-23-85	DEC 1st	FRI 12-27-85 6/
WED	01-08-86	NOV 3rd	FRI 01-10-86
WED	01-15-86	DEC 2nd	FRI 01-17-86
		JAN 1st	
WED	02-05-86	DEC 3rd	FRI 02-07-86

- 1/ June first closing: Changed from Monday, 07-01-85, to Friday, 06-28-85, because of the observance of Independence Day on Thursday, 07-04-85.
- 2/ August first closing: Changed from Monday, 09-02-85, to Friday, 08-30-85, because of the observance of Labor Day on Monday, 09-02-85.
- 3/ August third closing: Changed from Friday, 10-11-85, to Thursday, 10-10-85, because of the observance of Columbus Day on Monday, 10-14-85.
- 4/ September third closing: Changed from Friday, 11-08-85, to Thursday, 11-07-85, because of the observance of Veterans Day on Monday, 11-11-85.
- 5/ November second closing: Changed from Friday, 12-20-85, to Wednesday, 12-18-85, because of the observance of Christmas Day on Wednesday, 12-25-85.
- 6/ December first closing: Changed from Monday, 12-30-85, to Friday, 12-27-85, because of the observance of New Year's Day on Wednesday, 01-01-86.

APPENDIX H. 1: CLOSING DATES FOR RECEIPT OF 1986 CES DATA

Manual Reference: Section 6.7.2

Closing Dates for Receipt in BLS-Washington of Individual BLS 790 Report Data for 1986 for National Tabulation:

Data Month 1986	First Closing	Second Closing	Third Closing
Jan.	Mon. 02-03-86	Fri. 02-21-86	Fri. 03-14-86
Feb.	Mon. 03-03-86	Fri. 03-21-86	Fri. 04-11-86
Mar.	Mon. 03-31-86	Fri. 04-18-86	Fri. 05-09-86
Apr.	Mon. 04-28-86	Fri. 05-16-86	Fri. 06-06-86
May.	Mon. 06-02-86	Fri. 06-20-86	Fri. 07-11-86
Jun.	Fri. 06-27-86 <u>1/</u>	Fri. 07-18-86	Fri. 08-08-86
Jul.	Mon. 07-28-86	Fri. 08-15-86	Fri. 09-05-86
Aug.	Fri. 08-29-86 <u>2/</u>	Fri. 09-19-86	Fri. 10-10-86
Sep.	Mon. 09-29-86	Fri. 10-17-86	Fri. 11-07-86
Oct.	Mon. 11-03-86	Thu. 11-20-86 <u>3/</u>	Fri. 12-12-86
Nov.	Mon. 12-01-86	Fri. 12-19-86	Fri. 01-09-87
Dec.	Mon. 01-05-87 <u>4/</u>	Fri. 01-16-87	Fri. 02-06-87

1/ June first closing: changed from Mon., 06-30-86 to Fri., 06-27-86 because of the observance of Independence Day on Fri., 07-04-86.

2/ August first closing: changed from Mon., 09-01-86 to Fri., 08-29-86 because of the observance of Labor Day on Mon., 09-01-86.

3/ October second closing: changed from Fri., 11-21-86 to Thu., 11-20-86 because of the observance of Thanksgiving Day on Thu., 11-27-86.

4/ December first closing: changed from Mon., 12-29-86 to Mon., 01-05-87 to accommodate a press release date of 01-09-87, allowing time for CPS seasonal adjustment.

APPENDIX H.2: CLOSING DATES FOR RECEIPT OF 1985 CES STATE AND
AREA ESTIMATES

Manual Reference: Section 7.4

Closing Dates for the Receipt at BLS-Washington of the Monthly Estimates of Employment, Hours, and Earnings for 1985 and the Benchmark Revisions and Annual Averages for 1984.

<u>Data Month - 1985</u>	<u>Closing Date</u>
January	Wed. 02-20-85
February	Wed. 03-27-85
March	Wed. 04-24-85
April	Wed. 05-22-85
May	Wed. 06-26-85
June	Wed. 07-24-85
July	Wed. 08-21-85
August	Wed. 09-25-85
September	Wed. 10-23-85
October	Wed. 11-20-85
November	Tue. 12-24-85 1/
December	Wed. 01-22-86

1/ November 1985 S & A Closing: Changed from Wed., 12-25-85 to Tue., 12-24-85 because of the observance of Christmas Day on Wed., 12-25-85.

Annual Benchmark Revisions/Annual Averages

To facilitate the BLS processing of the annual revisions (monthly and annual average estimates revised to new benchmark levels), these estimates need to be received by BLS after the preliminary estimates and for December 1984 (due January 23, 1985) have been completely processed by BLS (scheduled for February 8, 1985), but prior to the BLS processing of the preliminary estimates for January 1985 (due February 20, 1985). (BLS will not process any of the annual revisions until it has updated its data base, LABSTAT, with the preliminary estimates, on the old benchmark levels, for December 1984; this is scheduled for February 8, 1985.) The BLS due date for receipt of the annual revisions from the States is February 11, 1985. BLS will then edit, screen, review, correct, and enter the annual revisions onto LABSTAT from February 11 through February 19. This procedure has been established to ensure that the final estimates for December 1984, the estimates for the preceding months, and the preliminary estimates for January 1985 will be comparable on LABSTAT (i.e., they will all be on the new benchmark levels).

Switchover Month

January 1985

Annual Benchmark Revision
Closing Date

Mon., February 11, 1985

APPENDIX I.1: TELECOMMUNICATION OF DATA IN A BATCH MODE

Manual Reference: Sections 5.3.B.2, 6.7.4.B, 7.5.2

This Appendix describes procedures for the telecommunication (electronic transmission) of information from States to BLS-Washington in a batch mode using remote job entry (RJE). These instructions cover transmission of BLS 790 microdata, State and Area estimates, and Registry transactions.

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APPENDIX I: TELECOMMUNICATION OF DATA

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- I.1 Telecommunication of Data in a Batch Mode
- I.2 On-line Keyboard Data Entry System

A. Initiation of Telecommunication Transmission

Telecommunication is the most efficient data transmission medium available. Therefore BLS-Washington strongly urges all States which have the capability to telecommunicate their data. Each State should work with its Regional Office to implement switchover to telecommunication.

I. Equipment Necessary for Establishing Telecommunication

The State must have an IBM-compatible dial-up remote job entry (RJE) terminal in order to telecommunicate data. RJE is a set of modular components designed and assembled to facilitate bulk transmission and receipt of data from remote locations. There is a great variety of equipment available that can be utilized for electronic transmission.

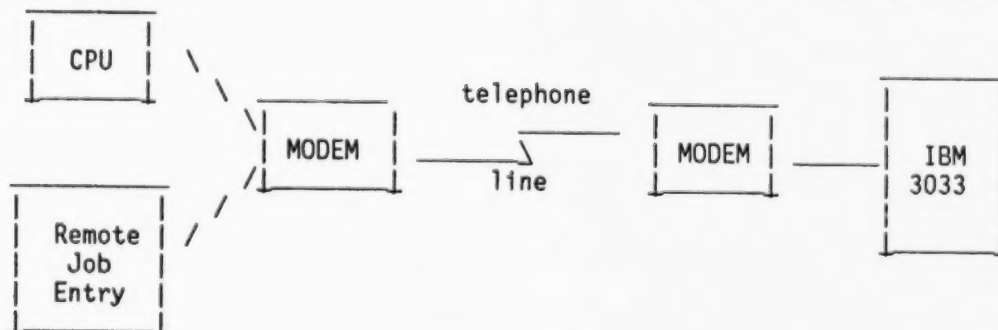
Vendors of a given terminal can specify whether the device is capable of emulating the IBM terminals. If you have any questions regarding a specific terminal, refer them to BLS-Washington through the Regional Office.

In addition, it is possible to emulate an IBM remote job terminal by using software which will allow direct transmission of data from a State computer to the BLS-Washington computer. Upon request, BLS-Washington will supply a software package for use in transmitting from computer to computer (CPU to CPU).

The most cost-effective equipment will vary among States, depending on the amount of data, the frequency and speed of transmission in relation to the cost or lease of the equipment, and long distance telephone charges.

STATE

B L S - W A S H I N G T O N



2. Procedures for Switchover

a. Plan State Switchover

The State advises the BLS Regional Office of its plans to switch to telecommunication of data.

b. Provide Software

BLS-Washington provides the software (programs that are used to transmit and accept the data). This process is controlled by Job Control Language (JCL), which is used by the State to describe the data being sent. The State must first make the JCL State-specific. The JCL instructions are shown in Section D:

- . Microdata -- D.1
- . State and Area estimates -- D.2
- . Registry transactions -- D.3

c. Arrange for Testing Phase

The Regional Office notifies BLS-Washington to arrange for the testing phase. This phase consists of two consecutive successful test transmissions. BLS-Washington will report any problems to the Regional Office and will provide a BLS contact to monitor the tests and assist the State. (See section E of this appendix for contact name and phone numbers.)

d. Use Dual Transmission Procedures

The State follows standard dual transmission procedures used in the CES program for switching from one transmittal method to another (See Section 6.7.4.B). Dual transmission may be stopped when the following conditions are met:

- . A State has successfully transmitted data for a least two consecutive closings, and
- . A State is notified by BLS to cease dual transmission.

B. Transmission Instructions**1. General Transmission Instructions**

The same telecommunications procedures are to be used for transmission of CES microdata (BLS 790), macrodata (State and Area estimates), and Registry transactions.

a. Use the Record Formats in the Manual

Record formats for the data are the same as the keypunch instructions for submitting the data on punched cards or magnetic tape:

- . Microdata: Exhibit 6-A
- . State & Area Estimates: Exhibit 7-B
- . Registry Formats: Exhibit 5-A

b. Use Telephone Lines as Telecommunication Medium

Use long-distance telephone lines for data transmission. Charge the cost of these calls directly to the CES survey LMI budget.

c. BLS-Washington Assigns a "Remote Identification" Number

After acquiring the necessary transmission equipment, contact BLS-Washington through the Regional Office. BLS-Washington will assign the State a unique "remote identification" number.

2. Detailed Transmission Instructions

a. Follow the Schedule for Data Transmittal

. MICRODATA (BLS-790)

All transmissions must be completed on the scheduled day by 4:00 PM (EST).

First Closing

For CES microdata first closings, each State must transmit all available data on the Friday immediately preceding the Monday closing (unless there is some rescheduling due to holidays, etc.), and any additional data on the day of the closing (usually Monday).

Second and Third Closing

For second and third closings, the State must transmit all available data on the day of the closing (usually Friday) and any additional data on the following working day.

Late Transmission

If unavoidable problems prevent data transmission at the prescribed times, the computer center will accept transmission 24 hours a day, seven (7) days a week. However, late transmission will not ensure that the data will be processed in time for a scheduled closing.

. MACRODATA (STATE AND AREA ESTIMATES)

Make transmissions according to the schedule shown in Appendix H.2.

. REGISTRY TRANSACTIONS

Submit Registry Transactions on a flow basis. BLS-Washington processes available Registry updates the Wednesday preceding each microdata closing. Consult the Regional Office for the exact update schedule.

b. Prepare a Magnetic Tape as Backup

When the transmission data files for microdata and State and Area estimates are created, prepare a magnetic tape file to be used as a backup if telecommunication cannot be completed. (See tape specifications in Exhibit 6-B of Section 6.)

c. Look Up Status of the Computer Center (Optional)

Before initiating the transmission, obtain the status of the BLS-Washington computer center (see Section E for the telephone number). This is not a requirement, but will give an indication of the amount of workload the computer system is experiencing. The information may be used to plan the transmission time to avoid waiting on-line.

d. Prepare JCL Statement

The appropriate JCL statements are described in Section D. These JCL statements pertain to card storage. If the storage medium is tape, disk, etc., modify the JCL parameter accordingly.

e. Dial the Computer Center Telephone Number

Three telephone lines are available for telecommunication. See Section E. These numbers are for transmission speed of 4800 BAUD. At this speed approximately 200 records per minute can be transmitted. If the State's equipment does not transmit at 4800 BAUD, contact the Regional Office and request a telephone number which corresponds to the transmission speed required.

If one line is busy, try one of the other lines. If, after several attempts, all available lines are busy, contact BLS-Washington (see Section E for telephone numbers).

f. Establish Communications

Successful contact will be indicated by a message from the computer facility. After contact has been established, load the sign-on card and the card containing a // in columns 1-2 (see D, JCL specifications). Be sure the computer facility has acknowledged contact before attempting to transmit data.

g. Logon and Submit the Job

Read in the JCL instructions.

. MICRODATA (BLS-790)

Insert the data cards after the //S1.SYSIN DD * card. Note that the closing date and reference month must be changed each month.

. MACRODATA (STATE AND AREA ESTIMATES)

Insert the data cards after the //CARDS DD * card. Note that year and month of closing must be changed each month.

. REGISTRY TRANSACTIONS

Insert the cards after the //INPUT DD * card.

After entering data cards, enter end of data card, and job card.

h. Determine the Status of the Transmission

After the data have been transmitted, the job will receive a system-assigned JOB number. After 10 to 20 seconds you may type the following command to determine the status and job number of your transmission:

\$D'iii'

How you enter this command depends on your hardware; iii are your initials (see JCL in Section D.) This command will give you a list of your jobs, showing job number, job name, and status. Examples of messages:

. JOB job# jobname AWAITING CLASSIFICATION

JCL has not been interpreted. Type in \$D'iii' again until this message no longer appears.

. JOB job# jobname AWAITING EXECUTION E-xxx pri 5 any

The job is waiting to be run. XXX tells how many jobs are to be executed before your job. This will aid in determining how long it will be before the job executes.

. JOB job# jobname EXECUTING

The job is running. The output will be available in a minute or two.

. JOB job# jobname PRT Rnn R=nnn T=nnn

The job is awaiting print on remote nn. R is the number of lines in the job remaining to be printed; T is the total number of lines in the job. If this message appears immediately after transmission, there is a JCL error. Call the Regional Office.

. JOB job# jobname ON Rnn R=nnn T=nnn

The job is printing on remote nn. If this message appears immediately for a job which was just submitted, there is a JCL error, and the job is printing in BLS-Washington. In this instance, call the Regional Office, who will contact BLS-Washington.

. JOB NOT FOUND OR JOB NOT YOURS

If this message appears immediately after a job was submitted, there is a JCL error. The job has already printed. Check to be sure you entered the right initials. Call the Regional Office, who will contact BLS-Washington. This message also appears when all copies of successful transmissions are printed.

i. Logoff

After transmitting and checking for status, logoff.

j. Notify the Regional Office

Call your Regional Office to indicate time of transmission for all telecommunication. For microdata transmissions, also provide counts by month of the number of records sent.

k. Confirm a Successful Transmission

Logon as described in item f above.

. MICRODATA (BLS-790)

If the job has successfully executed, a listing of the data transmitted and a summary of the record counts by month will be printed. The receipt of this information is optional, depending on State JCL instructions. If you expect a listing, but there is none, perform a status check as described in h above. If the job has executed, but there is no listing, a problem is indicated. Call the Regional Office who will investigate the problem with BLS-Washington. System messages and JCL listings are routed to BLS-Washington.

. MACRODATA (STATE AND AREA ESTIMATES)

When the job has executed, a printout of the facsimile report is routed to the State computer. Unless otherwise requested, the system messages and JCL listing are routed to BLS-Washington.

. REGISTRY

If the job has successfully executed, the State will receive a listing of the Registry transactions just submitted. The accompanying system messages pages will display the date and time that the job executed.

. AUTOMATIC DISCONNECT

The computer center will automatically log off your remote if it remains unused for 15 minutes, to prevent incurring unnecessary computer and line charges. Do not remain logged on to the computer just to await completion of the job. Remaining logged on has no effect on the completion of the job. Call back and log on later to check the job status and to receive printouts, as described in paragraphs h and k above.

C. Problems in Transmitting Data**1. A Job Interrupted During Transmission**

Sometimes a job will be interrupted during transmission. The most common cause of these interruptions is Input/Output (I/O) errors caused by use of a bad phone line or port at either computer center. If your transmission is interrupted immediately contact the BLS-Washington computer center to determine the cause for the interruption (see Telephone Numbers, Section E). If you have recurring problems with interruptions, have your transmission equipment, particularly the modem, checked and tested. Report any transmission interruption and its probable cause to BLS-Washington so that a follow-up can be conducted.

2. Other Transmission Problems

If you have trouble making a transmission, call BLS-Washington to report the problem immediately (see Telephone Numbers, Section E). Also report the specific transmission problem to the Regional Office in writing. Provide the following information:

- Type of data being transmitted (micro, macro, etc.)
- Date of transmission
- Time of transmission
- Type of equipment used
- Telephone number used
- When the problem was discovered?
- Was the Computer Center contacted?
- If so, to whom did you speak?
- Was BLS-Washington contacted?
- If so, to whom did you speak?
- Any other pertinent information.

3. Failure of Electronic Transmission

If telecommunication fails after repeated attempts, use the backup tape created earlier to send data to BLS-Washington (see Section B.2.b of this appendix). Call the Regional Office, who will contact the Office of Field Operations in Washington, D.C., to make arrangements for mailing magnetic tape to BLS-Washington.

D. JCL Instructions

The following pages display the JCL instructions needed for the electronic transmission of CES (BLS 790) microdata, CES macrodata (State and Area estimates), and Registry transactions from a State directly to BLS-Washington.

- . The JCL instructions shown are set up for card input; States must change the JCL parameters to correspond to their data storage medium.
- . The first card is a sign-on card.
- . Change the dates in the "EXEC" card to correspond to the closing for which microdata and State and area estimates are being transmitted.
- . For microdata and macrodata transmissions, a value "a" in the "EXEC" card must be changed if an additional transmission is made for the same closing.

1. JCL Specificationsa. Microdata (BLS-790)

(1) Load sign-on cards:

--- position 1	--pos.25	---- position 35
v	v	v
/*SIGNON OSIDD REMOTEnn	pppppppp	aaaa/iii
//		

(2) Await response "COMMUNICATION ESTABLISHED", then load remaining JCL cards:

```
//iii790 JOB (aaaa,GA5,2),'FOX',PRTY=Q
/*LOGONID iiaaaa
/*PASSWORD pppppppp
/*OUTPUT A DEST=(RMTnn,RMT16)
/*ROUTE PRINT RMT16
//PROCLIB DD DSN=CN8120.KKF.EE790.PROCLIB,DISP=SHR
//STEP1 EXEC PRECNTST,CLMONTH=date01a,EPARM=''/mmyy'',
//          ESTATE=cc
//S1.SYSIN DD * 1/
(insert microdata)
/*
// 2/
```

(3) Load sign-off card to log-off:

```
/* SIGNOFF
//
```

The following variable fields must be replaced by the appropriate values:

- "nn" -- Enter remote ID assigned to your State. This is either a 2- or 3-digit code. Assigned by BLS-Washington.
- "aaaa" -- Enter the 4-character account.
- "iii" -- Enter the 3-character initials.
- "pppppppp" -- Enter the 3- to 8-character password.
- "date01" -- Enter 6-position date of closing you are submitting data for; e.g. APR2ND, APR3RD.
- "a" -- Enter a unique alpha (sequence) code for each submittal for that closing. ("A" for the first submittal; "B" for the second submittal; etc.)
- "mmyy" -- Enter the reference month and year of the closing; e.g. "0484".
- "cc" -- Enter State FIPS alpha code.

- 1/ Denotes card input; modify to correspond to storage medium.
- 2/ End of job.

b. Macrodata (CES State and Area Estimates)

Use these JCL statements to transmit State and area estimates to BLS-Washington and to generate a facsimile report. Delete the 3 JCL statements marked with "1/" to transmit estimates without creating a facsimile report.

(1) Load sign-on cards:

```

|--- position 1          |--pos.25      |---- position 35
v                        v              v
/*SIGNON OSIDD REMOTEnn FOX      8116/ss3
//

```

(2) Await system messages indicating that communications have been established; then load remaining JCL cards:

```

1/ //ss3CESSA JOB (8116,GA5,5,3),'FOX',PRTY=5,MSGCLASS=A
1/ // *LOGONID ss38116
// *PASSWORD pppppppp
// *ROUTE PRINT RMT16
// *OUTPUT RMTS DEST=(RMT16,RMTnn,RMT14x)
1/ //PROCLIB DD DSN=CN8126.WSR.STAREA.PROCS,
1/ // DISP=SHR
// ONE EXEC SORTW
// SORTOUT DD DSN=CN8123.iii.INPUT.ss.rr.Ryymma,
// DISP=(NEW,KEEP,DELETE),
// UNIT=3380,DCB=(RECFM=FB,LRECL=80,BLKSIZE=6320),
// VOL=SER=BLS096,SPACE=(TRK,(1,1),RLSE)
// SYSIN DD *
// SORT FIELDS=(8,12,CH,A,4,4,CH,A,21,8,CH,A)
// SORTIN DD *
(Insert Data Here)
1/ // *
1/ // TWO EXEC PROC=FACSIM,INDATA='CN8123.iii.INPUT.ss.rr.Ryymma'
//

```

(3) Load sign-off card to log-off:

```

/*SIGNOFF
//

```

The following variable fields must be replaced by the appropriate values:

- "nn" -- Enter the remote I.D. number assigned to the State. This is either a 2-or 3-digit number. Assigned by BLS-Washington.
- "ss" -- Enter the State alpha FIPS code (2 digits).
- "pppppppp" -- Enter the password of up to 8 characters for the account and initials of the previous card. This password is often the same as the initials.
- "x" -- Enter the regional office terminal I.D. number from the table below.
- "iii" -- Enter the regional office initials from the table below.
- "rr" -- Enter the regional office I.D. from the table below.
- "yymm" -- Enter the reference year and month, where:
 yy = the 2-digit year (85, 86, etc.)
 mm = the 2-digit month (01=January, 02=February, etc.)
- "a" -- Enter the single digit transmission sequence code to distinguish output, particularly when multiple transmissions are made, where
 A = the first transmission,
 B = the second transmission, etc.

Table of Regional Office Initials and I.D.'s

Regional Office	I.D. (rr)	Terminal No. (RMT 14x)	Initials (iii)
Boston	BR	1	MRX
New York	NR	2	JFZ
Philadelphia	PR	3	MLQ
Atlanta	AR	4	PIE
Chicago	CR	5	RSJ
Dallas	DR	6	RAQ
Kansas City	KR	7	TCM
San Francisco	SR	8	SKJ

c. Registry Transactions

(1) Load sign-on cards:

```

|--- position 1      |--pos.25      |---- position 35
v                    v                    v
/*SIGNON OSIDD REMOTEnn pppppppp      aaaa/iii
//

```

(2) Await response "COMMUNICATION ESTABLISHED", then load remaining JCL cards:

```

//cc1UPREG JOB (8124,GA5,1),'statename RTNUPDATE',PTY=Q
//*LOGONID iiiaaaa
//*PASSWORD pppppppp
/*OUTPUT RGN DEST=(RMT16,RMT14x)
/*OUTPUT STCP DEST=(RMTnn,RMT14x)
//PROCLIB DD DSN=CN8120.KKF.REGION.PROCLIB,DISP=SHR
//TRY1 EXEC RTNSTUPD,BLSREG=bbbbbbbbb
//INPUT DD * 1/
(insert Registry transactions)
/*
// 2/

```

(3) Load sign-off card to log-off:

```

/*SIGNOFF
//

```

The following variable fields must be replaced by the appropriate values:

- "nn" -- Enter the remote I.D. number assigned to the State. This is either a 2-or 3-digit number. Assigned by BLS-Washington.
- "aaaa" -- Enter the 4-character account.
- "iii" -- Enter the 3-character initials.
- "cc" -- Enter the 2-character State alpha FIPS code.
- "bbbbbbbbb" -- Enter regional office name (see below).
- "Statename" -- Enter State name (spelled out using up to 10 letters).
- "pppppppp" -- Enter the 3- to 8-character password.
- "x" -- Enter regional office ID (see below).

- 1/ Denotes card input; modify to correspond to storage medium.
- 2/ End of job.

Regional Name (bbbbbbbbb) and Regional ID (x):

Boston	- BOSTON	(1)	Chicago	- CHICAGO	(5)
New York	- NEWYORK	(2)	Dallas	- DALLAS	(6)
Philadelphia	- PHILA	(3)	Kansas City	- KANSAS	(7)
Atlanta	- ATLANTA	(4)	San Francisco	- SANFRAN	(8)

2. Changes Needed for Resubmittal

When a job has executed, a dataset or tape is created and catalogued. If there is a problem with the transmission, the Regional Office will request submission of a new job. This resubmittal must contain new JCL parameters in the "EXEC" card so that a duplicate dataset is not created.

a. BLS 790 Microdata

The closing and month parameters determine the month heading used in the summary report.

Make JCL changes for a resubmittal by changing the first variable after the number of the closing. Set this alpha variable to "A" for the first submittal, "B" for the first resubmittal, "C" for the second resubmittal, etc.

CLMONTH =

Original

Resubmittal

MAR1STA

MAR1STB

b. CES State and Area Estimates

Make JCL changes for a resubmittal by changing the alpha sequence code which follows the year and month of the closing date.

DATE =

Original

Resubmittal

8301A

8301B

The year and month and alpha sequence code become part of the dataset name.

c. Registry Transactions

No JCL changes are needed. Each subsequent transmission loads into a cumulative datafile.

E. BLS-Washington Telephone Numbers for Data Transmission

The following BLS-Washington numbers may be telephoned in the event of telecommunication difficulties. Please also advise your BLS Regional Office of any difficulties and of any corrective action taken.

<u>Reason for Call</u>	<u>Telephone Number</u>	<u>Contact</u>	<u>Appendix I.1 Reference</u>
Telecommunication -- A job is interrupted during transmission	301-231-6113	OSD Computer Center "Communications"	C.1
Telecommunication -- You have trouble making a transmission	202-523-1206	BLS, Ken Fox	C.2
or call, concerning:			
Microdata transmission	202-523-1563	Irvin Cheek	
Macrodata transmission	202-523-1750	Jim MacIntosh	
Registry transmission	202-523-1190	Ann Cunningham	
Telecommunication -- You want to obtain the status of the computer center	800-638-8742	OSD Computer Center	B.2.C
Telecommunication -- You want to telecommunicate data, but all lines are busy	202-523-1206	BLS, Ken Fox	B.2.e
Telecommunication -- Telephone numbers available for telecommunication of data	301-468-1110 301-231-0099 301-984-8949 301-984-1547 800-638-6627 800-638-6668 800-638-6669	(4800 BAUD) (300 & 1200 BAUD) (300 & 1200 BAUD) (4800 BAUD) Dedicated to CES use WATS line (4800 BAUD) WATS line (2400 BAUD) WATS line (300 & 1200 BAUD)	B.2.e

The OSD computer center maintains up-to-date phone numbers on a public dataset; access by the command: USE FROM &PUBLIC.PHONES

APPENDIX I.2: ON-LINE KEYBOARD DATA ENTRY SYSTEM

Manual Reference: Section 6.7.4.B.5

The on-line data entry system is designed for submission of Key Reporters and other large firms in the CES program whose reports are received by the State agency too late to be submitted in time for a scheduled closing using conventional methods. If a State has a data entry terminal and wants CES to use this procedure, it should contact its Regional Office, so that the Regional Office can contact BLS-Washington to obtain the account number, a unique user-I.D. code and password for the State, the TYMNET telephone number, and the TYMNET logon instructions.

Use of this transmittal procedure should allow the State to maximize the number of reports transmitted to BLS-Washington for each closing. This is especially important for first closings in order to transmit data for the maximum number of Key Reporters. This procedure can be used in lieu of transmitting last-minute data on CES Substitute Schedules.

States using this new data entry program should send, at a minimum, all national Key Reporter data available and other significant reports which were not included in their regular transmittal(s) for a closing. These data must be sent by 4:00 p.m. (Eastern Time) on the closing dates unless otherwise specified.

Detailed Instructions

1. Call the BLS-Washington computer facility. Phone numbers are at the end of Appendix I.1. When the send and carrier light is activated, indicating communication has been established, hit the carriage return and do the following:

Type in:	The Response Received:
a. TSO	READY TO OSI
b. LOGON	ENTER LOGONID
c. user ID (111aaaa)	ENTER CURRENT PASSWORD FOR
d. password (3 to 8 characters)	LOGON IN PROGRESS READY
e. EXEC ENTER790	DO YOU WANT TO SAVE ALL PREVIOUSLY ENTERED DATA:
e. YES or NO	ENTER THE MONTH AND YEAR:
f. mmyy	

APPENDIX I.2: ON-LINE KEYBOARD DATA ENTRY SYSTEM

2. The program will now begin a loop asking for data for the month entered in step four. The program will prompt for multiple data items. There must be a response for each data item requested with the responses separated by a comma or space. Data items need not be zero-filled. The only acceptable nonnumeric entry is the dash ('-'), which indicates that no data are available for an item.

NOTE: If the last item is a dash ('-'), the user must follow it with a comma or a space before punching the carriage return key.

If the user should happen to type in only the first two responses when three are requested, TSO will prompt for the third item with a ':'. The same would happen if the last field entered were a dash and not ended with a comma or space.

Entries must be made in the proper sequence. The prompts for each reporter will be:

REPT	- (5-digit report number)
SIC	- (4-digit industry code)
AE	- (all employees)
WW	- (women workers)
PW	- (production workers)
PR	- (payrolls, rounded to nearest dollar)
MH	- (man-hours)
OTMH	- (prompted only for mfg. reports)
EXPL	- (explanation code; enter dash ('-') if N.A.)
LP	- (enter dash ('-') if already on 1-week basis)

When a report has been entered, the program will ask the user if the report is to be kept. If the user has made an error, answer 'NO' and then when the program prompts for REPT and SIC, type the report back in correctly. If the user answers 'YES' the record will be written to the output file. If the report is then noticed to be incorrect, enter changes in the form of '6' cards when the program prompts for corrections (see step 8).

APPENDIX I.2: ON-LINE KEYBOARD DATA ENTRY SYSTEM

3. When the user is finished entering data for the month and year specified in step 1, type in '99999.0' when prompted for 'REPT,SIC'.
4. Next the program will prompt the user for a different month and year. Type in the month and year as in step 1. The program will prompt for data as in step 2.
5. Finally, the program will prompt the user for corrections, changes, and additions ('card 6' data). Enter the data as in steps 2 through 4. Any errors entered in the initial input may be corrected through the entering of 'change cards' in this step.
6. When the user finishes entering changes, end as in step 3. TSO will then respond with 'READY' and then will proceed to list the entire set of cards entered. After the terminal is done listing the cards the user then should logoff (type 'LOGOFF' and press carriage return).

If necessary, more than one transmission may be made for a closing. The program will copy any reports previously entered and then will prompt for additional ones.

NOTE: Any data sent via terminal should not be included in subsequent transmittals of data except as corrections (type "6" cards).

APPENDIX J: BLS-Washington Mailing Addresses

<u>Material Mailed</u>	<u>Mailing Address</u>	<u>Section Reference</u>
State Press Release	Bureau of Labor Statistics Office of Employment Structure & Trends 441 G St., N.W. Room 2083 Washington, D.C. 20212	12.3.2
Registry Updates on Magnetic Tape	Bureau of Labor Statistics CES Registry Updates Attn: Jim Yule, Mail Code 3 441 G St., N.W. Washington, D.C. 20212	Exhibit 5-D
CES Microdata -- Schedules, punched cards, magnetic tapes, Schedule Substitute & Correction Forms	Bureau of Labor Statistics Automatic Data Processing Support Staff BLS 790, Code 52 441 G St., N.W. Washington, D.C. 20212	Exhibit 6-C
Replies to Flag Slips	Bureau of Labor Statistics Division of Monthly Industry Employment Statistics BLS 790, Room 2074 441 G St., N.W. Washington, D.C. 20212	Exhibit 6-C
Magnetic tapes & punched cards	Bureau of Labor Statistics CES State and Area Estimates Federal/State Monthly Surveys (Mail Code 19) 441 G St., N.W. Washington, D.C. 20212	7.5.4
Solicitation Summary Totals	Bureau of Labor Statistics CES Program -- Solicitation - Code 3 441 G St., N.W. Washington, D.C. 20212	4.7.2

APPENDIX K. BIAS ADJUSTMENT FACTORS USED IN CALCULATING NATIONAL ESTIMATES

CES Manual Reference: Section 8.3

National bias adjustment factors are produced on a quarterly basis. The current quarter is projected based on the seasonally adjusted growth estimated over the previous quarter. Add to the following tables as updates are issued.

Table of Contents

- K.1 National Bias Adjustment Factors by Division
- K.2 National Bias Adjustment Factors, Two-digit SICs
- K.3 National Bias Adjustment Factors By Detailed Industry

K.1 National Bias Adjustment Factors by Division
Third Quarter 1985

DIVISION	AVE BIAS Q3_85	REGRESSION BIAS Q3_85
U.S. TOTAL	1.0022	1.0021
1 MINING	1.0019	1.0010
2 CONSTRUCTION	1.0030	1.0041
3 MANUFACTURING	1.0010	1.0009
5 T.P.U.	1.0021	1.0022
6 TRADE	1.0024	1.0019
7 F.I.R.E.	1.0017	1.0018
8 SERVICE	1.0031	1.0031

K.2 National Bias Adjustment Factors, Two Digit SIC
Third Quarter 1985

SIC2D	AVE BIAS 3_85	REGRESSION BIAS Q3_85
U.S. TOTAL	1.0022	1.0021
07	1.0125	1.0040
10	1.0017	1.0007
11	1.0045	1.0000
12	1.0005	1.0005
13	1.0026	1.0013
14	1.0000	1.0005
15	1.0029	1.0035
16	1.0020	1.0033
17	1.0034	1.0046
20	1.0004	1.0007
21	1.0023	1.0002
22	1.0007	1.0004
23	1.0010	1.0001
24	1.0021	1.0020
25	1.0005	1.0006
26	1.0009	1.0009
27	1.0019	1.0021
28	1.0004	1.0005
29	1.0000	1.0000
30	1.0016	1.0012
31	1.0005	1.0002
32	1.0005	1.0010
33	1.0003	1.0000
34	1.0008	1.0006
35	1.0010	1.0008
36	1.0017	1.0012
37	1.0006	1.0004
38	1.0019	1.0019
39	1.0006	1.0004
41	1.0013	1.0019
42	1.0021	1.0026
44	1.0030	1.0030
45	1.0034	1.0034
46	1.0000	1.0010
47	1.0062	1.0061
48	1.0016	1.0012
49	1.0008	1.0010
50	1.0030	1.0042
51	1.0021	1.0023
52	1.0016	1.0014
53	1.0014	1.0013
54	1.0020	1.0018
55	1.0015	1.0013
56	1.0029	1.0034
57	1.0036	1.0054
58	1.0030	1.0000
59	1.0025	1.0028
60	1.0009	1.0006
61	1.0023	1.0022
62	1.0010	1.0004
63	1.0004	1.0006
64	1.0035	1.0035
65	1.0031	1.0039

K.2 National Bias Adjustment Factors, Two Digit SIC
Third Quarter 1985

SIC2D AVE BIAS REGRESSION BIAS
3_85 Q3_85

66	1.0000	1.0000
67	1.0039	1.0049
70	1.0060	1.0065
72	1.0040	1.0040
73	1.0045	1.0048
75	1.0033	1.0029
76	1.0040	1.0065
78	1.0028	1.0010
79	1.0010	1.0003
80	1.0022	1.0019
81	1.0000	1.0010
82	1.0001	1.0002
83	1.0027	1.0030
84	1.0000	1.0000
86	1.0005	1.0014
89	1.0036	1.0049

K.3 National Bias Adjustment Factors by Detailed Industry
Third Quarter 1985

SIC	AVERAGE BIAS 1981-1983	BIAS FACTOR Q3_85
0790	1.0125	1.0040
1010	1.0075	1.0025
1020	1.0000	1.0000
1030	1.0000	1.0000
1070	1.0005	1.0005
1100	1.0045	1.0000
1200	1.0005	1.0005
1311	1.0000	1.0010
1312	1.0030	1.0025
1380	1.0045	1.0015
1420	1.0000	1.0005
1440	1.0000	1.0005
1460	1.0000	1.0005
1470	1.0000	1.0005
1520	1.0030	1.0020
1530	1.0000	1.0010
1540	1.0030	1.0055
1610	1.0030	1.0040
1620	1.0015	1.0030
1710	1.0030	1.0045
1720	1.0015	1.0015
1730	1.0035	1.0045
1740	1.0045	1.0045
1750	1.0025	1.0045
1760	1.0035	1.0050
1770	1.0075	1.0075
1780	1.0020	1.0035
1790	1.0020	1.0050
2010	1.0010	1.0015
2020	1.0000	1.0000
2030	1.0015	1.0015
2040	1.0000	1.0005
2050	1.0000	1.0000
2060	1.0000	1.0005
2070	1.0000	1.0005
2080	1.0000	1.0000
2090	1.0000	1.0005
2110	1.0025	1.0000
2120	1.0000	1.0000
2180	1.0025	1.0010
2210	1.0020	1.0010
2220	1.0020	1.0010
2230	1.0000	1.0000
2240	1.0010	1.0005
2250	1.0000	1.0000
2260	1.0000	1.0000
2270	1.0000	1.0005
2280	1.0005	1.0005
2290	1.0000	1.0005
2310	1.0005	1.0000
2320	1.0000	1.0000
2330	1.0020	1.0000
2340	1.0000	1.0000

K.3 National Bias Adjustment Factors by Detailed Industry
Third Quarter 1985

SIC	AVERAGE BIAS 1981-1983	BIAS FACTOR Q3_85
2350	1.0000	1.0000
2360	1.0010	1.0005
2370	1.0000	1.0000
2380	1.0000	1.0005
2390	1.0015	1.0005
2410	1.0025	1.0010
2420	1.0000	1.0005
2430	1.0055	1.0050
2440	1.0000	1.0010
2450	1.0000	1.0005
2490	1.0000	1.0005
2510	1.0000	1.0000
2520	1.0015	1.0015
2530	1.0015	1.0015
2540	1.0000	1.0000
2590	1.0030	1.0040
2610	1.0010	1.0010
2630	1.0000	1.0000
2640	1.0015	1.0015
2650	1.0005	1.0005
2710	1.0000	1.0005
2720	1.0020	1.0015
2730	1.0015	1.0025
2740	1.0070	1.0070
2750	1.0030	1.0030
2760	1.0000	1.0005
2770	1.0000	1.0005
2780	1.0020	1.0010
2790	1.0035	1.0045
2810	1.0000	1.0000
2820	1.0000	1.0000
2830	1.0005	1.0005
2840	1.0005	1.0010
2850	1.0000	1.0005
2860	1.0010	1.0010
2870	1.0000	1.0005
2890	1.0005	1.0005
2910	1.0000	1.0000
2950	1.0000	1.0000
2990	1.0000	1.0000
3010	1.0000	1.0005
3020	1.0000	1.0000
3061	1.0015	1.0010
3069	1.0015	1.0005
3070	1.0020	1.0015
3110	1.0005	1.0000
3130	1.0000	1.0000
3140	1.0000	1.0000
3160	1.0040	1.0015
3170	1.0010	1.0005
3190	1.0000	1.0000
3210	1.0000	1.0000
3220	1.0000	1.0000

K.3 National Bias Adjustment Factors by Detailed Industry
Third Quarter 1985

SIC	AVERAGE BIAS 1981-1983	BIAS FACTOR Q3_85
3230	1.0025	1.0030
3240	1.0000	1.0005
3250	1.0000	1.0005
3260	1.0015	1.0005
3270	1.0005	1.0015
3280	1.0000	1.0000
3290	1.0000	1.0005
3310	1.0005	1.0000
3320	1.0000	1.0000
3330	1.0000	1.0000
3340	1.0000	1.0000
3350	1.0005	1.0000
3360	1.0000	1.0000
3390	1.0010	1.0005
3410	1.0000	1.0010
3420	1.0010	1.0005
3430	1.0000	1.0010
3440	1.0005	1.0005
3450	1.0010	1.0005
3460	1.0005	1.0000
3470	1.0025	1.0015
3480	1.0020	1.0025
3490	1.0005	1.0000
3510	1.0025	1.0020
3520	1.0000	1.0005
3530	1.0000	1.0000
3540	1.0005	1.0005
3550	1.0000	1.0005
3560	1.0015	1.0015
3570	1.0015	1.0005
3580	1.0000	1.0005
3590	1.0020	1.0020
3610	1.0025	1.0025
3620	1.0030	1.0025
3630	1.0000	1.0005
3640	1.0000	1.0005
3650	1.0015	1.0005
3660	1.0015	1.0015
3670	1.0025	1.0010
3690	1.0010	1.0005
3710	1.0005	1.0000
3720	1.0000	1.0000
3730	1.0000	1.0000
3740	1.0010	1.0010
3750	1.0020	1.0025
3760	1.0025	1.0035
3790	1.0045	1.0035
3810	1.0010	1.0015
3820	1.0025	1.0025
3830	1.0025	1.0025
3840	1.0025	1.0020
3850	1.0035	1.0035
3860	1.0000	1.0005

K.3 National Bias Adjustment Factors by Detailed Industry
Third Quarter 1985

SIC	AVERAGE BIAS 1981-1983	BIAS FACTOR Q3_85
3870	1.0000	1.0000
3910	1.0010	1.0005
3930	1.0000	1.0010
3940	1.0015	1.0005
3950	1.0000	1.0010
3960	1.0005	1.0005
3990	1.0000	1.0000
4110	1.0010	1.0030
4120	1.0000	1.0000
4130	1.0035	1.0025
4150	1.0000	1.0005
4190	1.0060	1.0050
4210	1.0020	1.0025
4220	1.0040	1.0045
4400	1.0030	1.0030
4530	1.0035	1.0035
4580	1.0025	1.0030
4600	1.0000	1.0010
4710	1.0090	1.0080
4720	1.0050	1.0055
4790	1.0080	1.0050
4810	1.0000	1.0000
4820	1.0000	1.0000
4830	1.0020	1.0010
4890	1.0105	1.0090
4910	1.0005	1.0005
4920	1.0005	1.0000
4930	1.0005	1.0015
4940	1.0015	1.0025
4950	1.0040	1.0055
4980	1.0075	1.0070
5010	1.0010	1.0020
5020	1.0020	1.0025
5030	1.0130	1.0055
5040	1.0025	1.0040
5050	1.0025	1.0070
5060	1.0040	1.0030
5070	1.0015	1.0045
5080	1.0025	1.0050
5090	1.0015	1.0030
5110	1.0030	1.0030
5120	1.0010	1.0010
5130	1.0035	1.0035
5140	1.0030	1.0030
5150	1.0040	1.0045
5160	1.0000	1.0005
5170	1.0000	1.0005
5180	1.0015	1.0015
5190	1.0010	1.0015
5210	1.0005	1.0010
5230	1.0005	1.0005
5250	1.0005	1.0015
5260	1.0105	1.0040

K.3 National Bias Adjustment Factors by Detailed Industry
Third Quarter 1985

SIC	AVERAGE BIAS 1981-1983	BIAS FACTOR Q3_85
5270	1.0035	1.0010
5310	1.0015	1.0015
5330	1.0010	1.0005
5390	1.0000	1.0000
5410	1.0015	1.0015
5420	1.0035	1.0045
5460	1.0050	1.0055
5480	1.0080	1.0020
5511	1.0010	1.0010
5512	1.0055	1.0030
5530	1.0020	1.0010
5540	1.0010	1.0015
5580	1.0165	1.0040
5610	1.0000	1.0010
5620	1.0030	1.0045
5630	1.0010	1.0030
5640	1.0000	1.0010
5650	1.0050	1.0040
5660	1.0030	1.0010
5670	1.0025	1.0075
5710	1.0025	1.0045
5720	1.0015	1.0025
5730	1.0065	1.0080
5800	1.0030	1.0000
5910	1.0015	1.0025
5920	1.0000	1.0005
5930	1.0030	1.0030
5940	1.0025	1.0025
5960	1.0000	1.0010
5980	1.0005	1.0015
5990	1.0075	1.0065
6020	1.0005	1.0005
6030	1.0000	1.0000
6090	1.0130	1.0050
6120	1.0005	1.0010
6140	1.0000	1.0000
6150	1.0080	1.0080
6160	1.0100	1.0080
6180	1.0000	1.0000
6210	1.0005	1.0000
6290	1.0030	1.0020
6310	1.0005	1.0015
6320	1.0000	1.0000
6330	1.0005	1.0000
6380	1.0005	1.0000
6400	1.0035	1.0035
6510	1.0015	1.0015
6530	1.0050	1.0060
6540	1.0035	1.0020
6550	1.0030	1.0060
6600	1.0000	1.0000
6710	1.0070	1.0080
6780	1.0000	1.0010

K.3 National Bias Adjustment Factors by Detailed Industry
Third Quarter 1985

SIC	AVERAGE BIAS 1981-1983	BIAS FACTOR Q3_85
7010	1.0060	1.0065
7030	1.0065	1.0075
7050	1.0035	1.0035
7210	1.0015	1.0035
7220	1.0000	1.0015
7230	1.0030	1.0065
7240	1.0000	1.0010
7260	1.0000	1.0010
7280	1.0125	1.0030
7310	1.0025	1.0025
7320	1.0020	1.0055
7330	1.0065	1.0060
7340	1.0035	1.0050
7360	1.0045	1.0035
7370	1.0060	1.0085
7380	1.0045	1.0045
7510	1.0015	1.0030
7520	1.0000	1.0000
7530	1.0040	1.0035
7540	1.0045	1.0015
7620	1.0060	1.0065
7640	1.0000	1.0015
7680	1.0035	1.0070
7810	1.0055	1.0020
7820	1.0045	1.0015
7830	1.0000	1.0000
7920	1.0000	1.0015
7930	1.0005	1.0000
7940	1.0090	1.0010
7980	1.0000	1.0000
8010	1.0040	1.0045
8020	1.0040	1.0030
8030	1.0055	1.0040
8040	1.0115	1.0075
8050	1.0020	1.0025
8060	1.0005	1.0000
8070	1.0040	1.0035
8090	1.0085	1.0065
8110	1.0000	1.0010
8210	1.0000	1.0000
8220	1.0000	1.0000
8240	1.0025	1.0025
8280	1.0000	1.0010
8320	1.0035	1.0020
8330	1.0000	1.0010
8350	1.0060	1.0070
8360	1.0020	1.0030
8390	1.0005	1.0005
8400	1.0000	1.0000
8610	1.0005	1.0010
8620	1.0000	1.0010
8630	1.0010	1.0030
8640	1.0005	1.0010

K.3 National Bias Adjustment Factors by Detailed Industry
Third Quarter 1985

SIC	AVERAGE BIAS 1981-1983	BIAS FACTOR Q3_85
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8660	1.0000	1.0000
8680	1.0000	1.0010
8910	1.0045	1.0060
8930	1.0030	1.0045
8980	1.0005	1.0005

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